

Dell Portable Thunderbolt™ 3 Solid State Drive

500 GB/1 TB

User's Guide



Notes, cautions, and warnings



NOTE: A NOTE indicates important information that helps you make better use of your computer.



CAUTION: A CAUTION indicates potential damage to hardware or loss of data if instructions are not followed.



WARNING: A WARNING indicates a potential for property damage, personal injury, or death.

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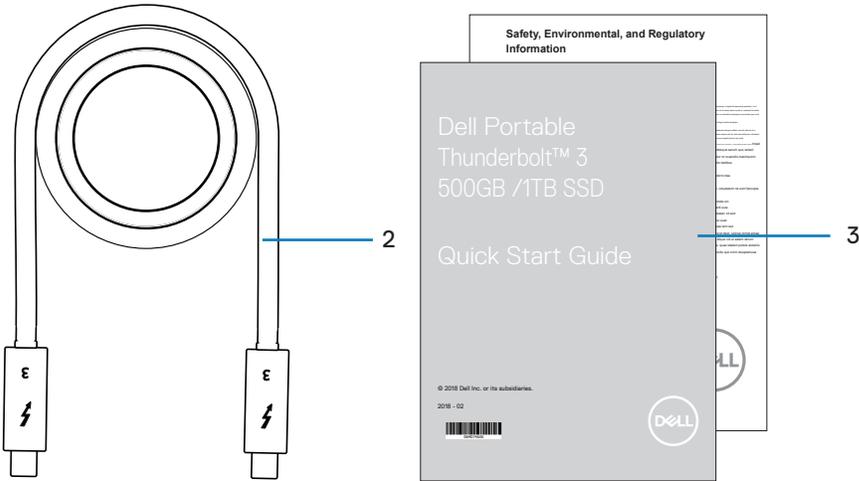
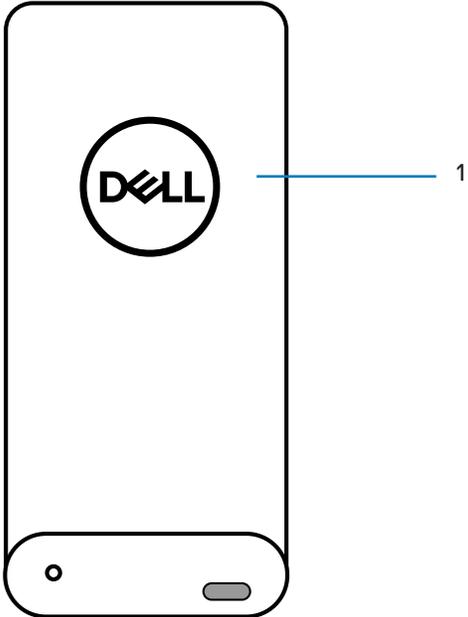
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What's in the box

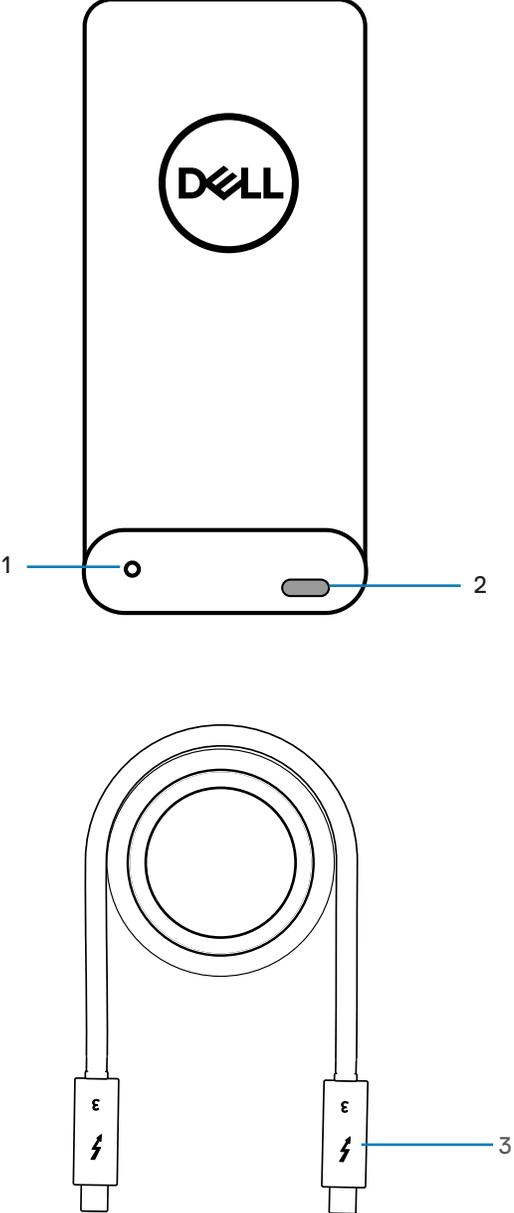


- 1 Dell Portable Thunderbolt™ Solid State Drive
- 3 Documents

- 2 Thunderbolt™ 3 cable

Features

The Dell Portable Thunderbolt™ 3 SSD features a single LED indicator located on the left of the Thunderbolt™ 3 port. Use this to help determine the status of the device power and status of the internal cooling fan.



- 1 Status LED
- 2 Thunderbolt™ 3 port
- 3 Thunderbolt™ 3 connector

The following table describes the status LED behavior on the SSD.

LED behavior	Power	Fan	Activity
Blinking White	ON	ON	Yes
White	ON	ON	No
Blinking Amber	ON	Malfunction	Yes
Amber	ON	Malfunction	No
Off	OFF	NA	NA

Before using your device



CAUTION: Unplugging the portable solid state drive from your computer when the light indicator is blinking white may cause data loss or damage to your device.



NOTE: Safely eject the solid state drive in the operating system of your computer before unplugging the cable. See “Ejecting the solid state drive in Windows” or “Safely removing the solid state drive using the Thunderbolt™ 3 SSD Utility” for instructions.

Introduction

Dell Portable Thunderbolt™ 3 SSD bus powered external SSD's are high-performance, ultra-portable, and reliable storage solutions. They are ideal for transferring large amounts of data quickly to help maintain productivity whether at home, in the workplace, or on the road.

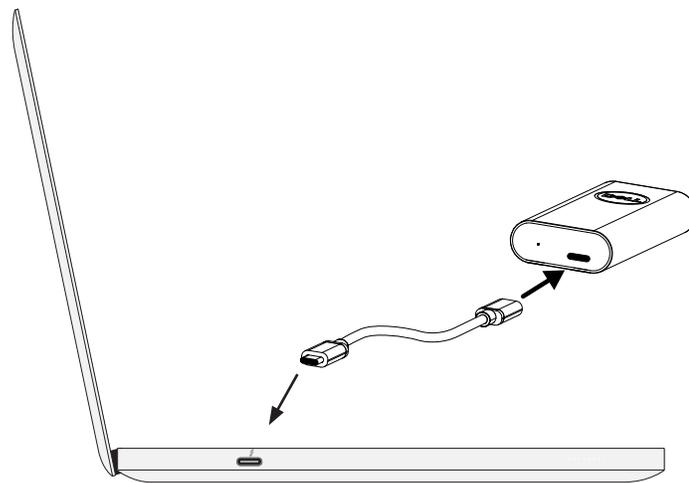
Use the Thunderbolt™ 3 SSD Utility to manage the drive.

Getting Started

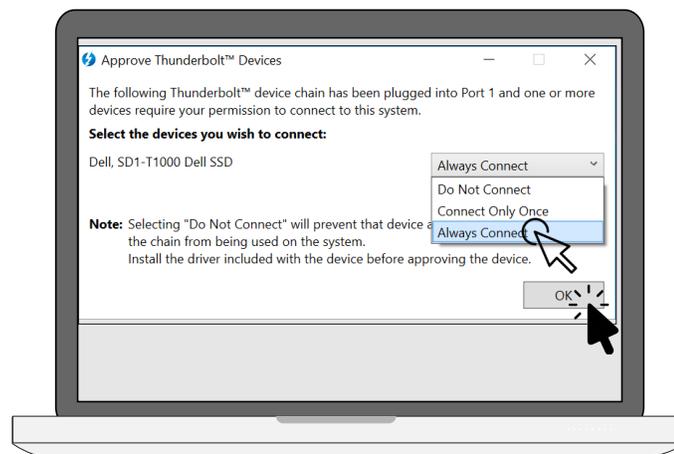
Connecting the solid state drive

Follow the procedure below to connect the drive to your computer.

- 1 Connect one end of the Thunderbolt™ 3 cable shipped with the device into the Thunderbolt™ 3 port on your computer. Connect the other end into the Thunderbolt™ 3 port on the Dell Portable Thunderbolt™ 3 SSD. A window will pop up after a few seconds.



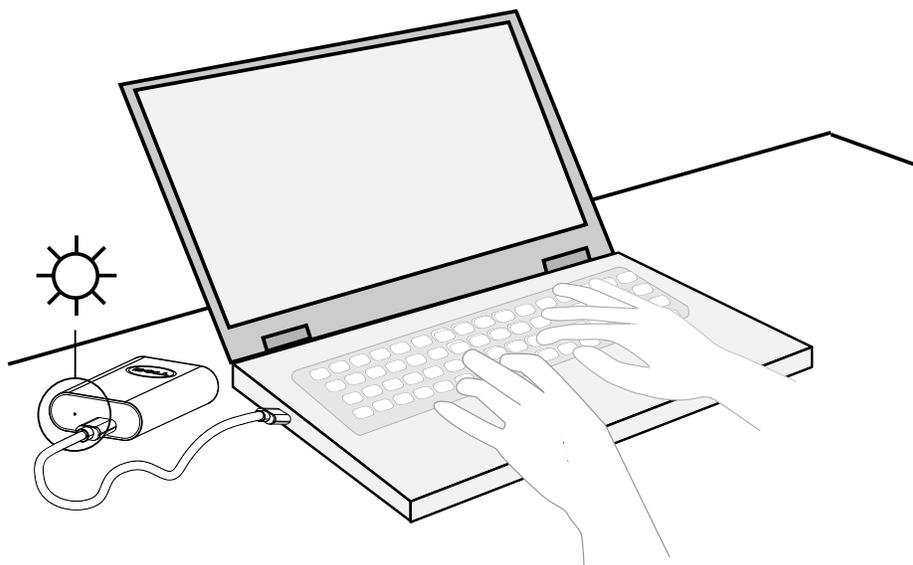
- 2 In the pop-up window you are asked if you want to allow the drive to connect to your system. Choose the *Always Connect* option from the drop down menu, and click **OK**.



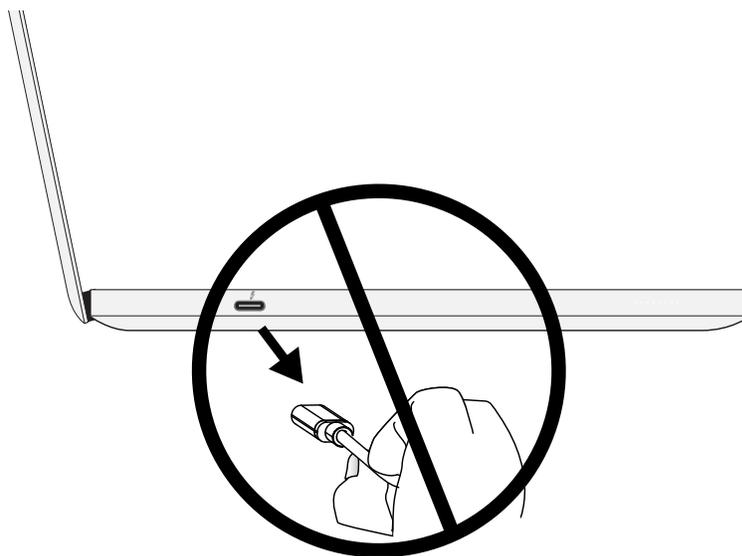
Disconnecting the solid state drive



CAUTION:
The status LED turns white when the drive is connected.



DO NOT disconnect the drive when the status LED is blinking.



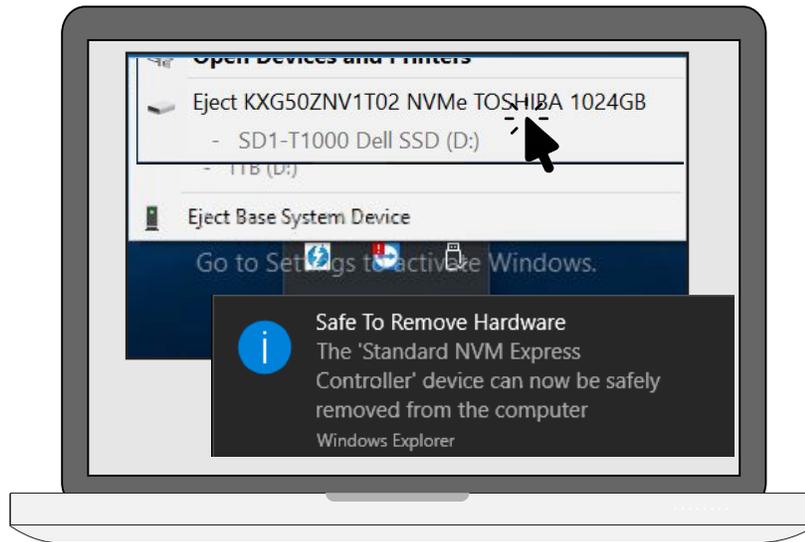
To remove the Dell Portable Thunderbolt™ 3 SSD, you have two options:

See “Ejecting the solid state drive in Windows” or “Safely removing the solid state drive using the Thunderbolt™ 3 SSD Utility”.

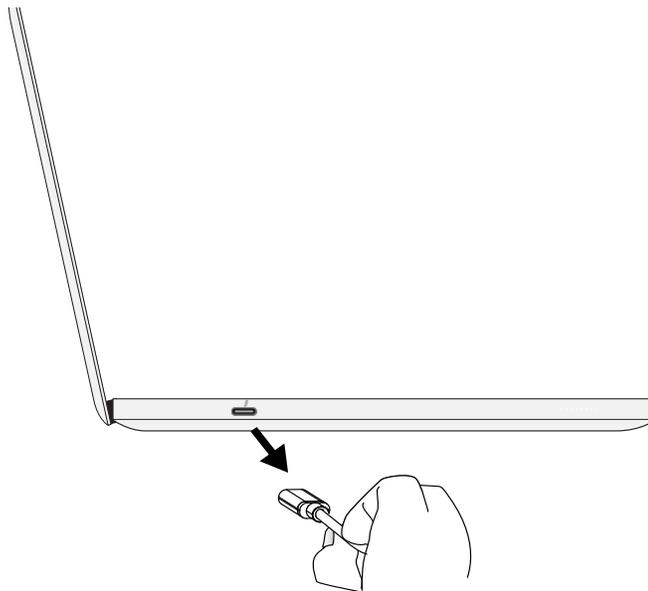
Ejecting the solid state drive in Windows

To remove the Dell Portable Thunderbolt™ 3 SSD using Windows eject drive follow these steps:

- 1 Move the cursor to the Windows System Tray and choose the Eject option for the Dell Portable SSD.



- 2 When the Safe To Remove Hardware message appears, disconnect the cable.



Ejecting the solid state drive using the Utility

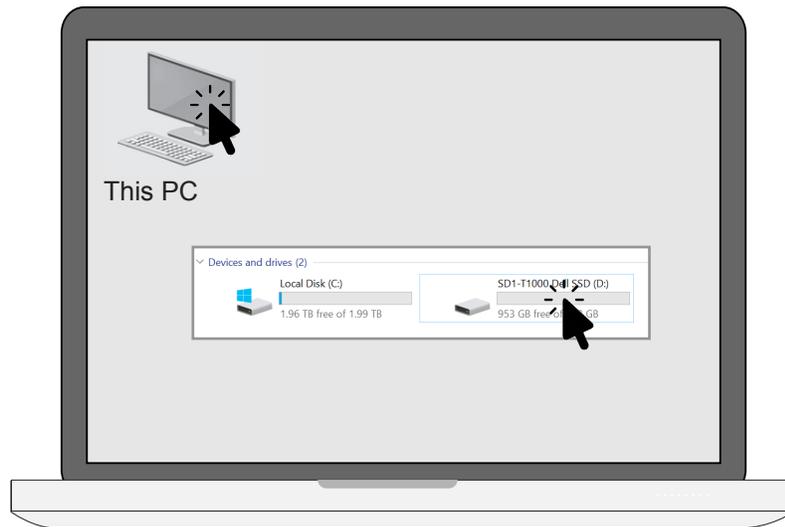
See "Thunderbolt™ 3 SSD Utility".

Thunderbolt™ 3 SSD Utility

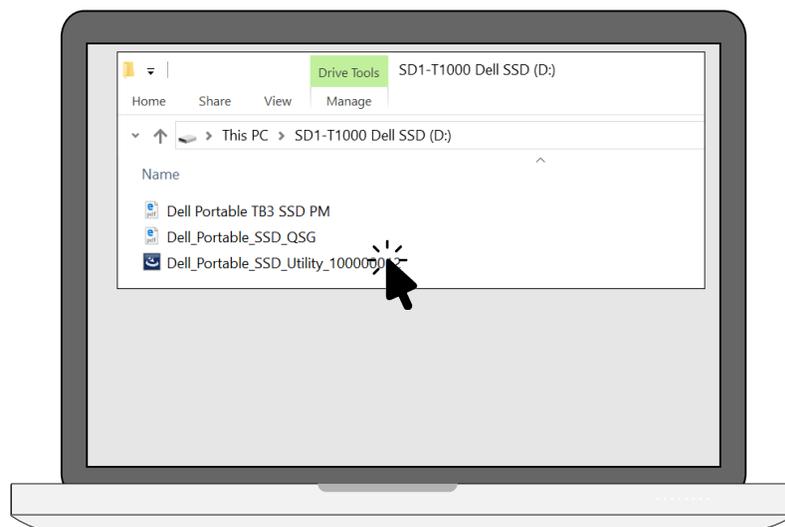
The Dell Portable SSD Utility installation file is located on the drive, and also available to download at [Dell.com/support](https://www.dell.com/support). The Dell portable SSD works without additional software. It is recommended to install the software utility to monitor performance. You also need the utility to lock the SSD for security.

Installing the Thunderbolt™ 3 SSD Utility

- 1 Use Windows Explorer to open or view the drive. Double-click on **This PC** on the desktop, the drive is displayed along with other storage devices.



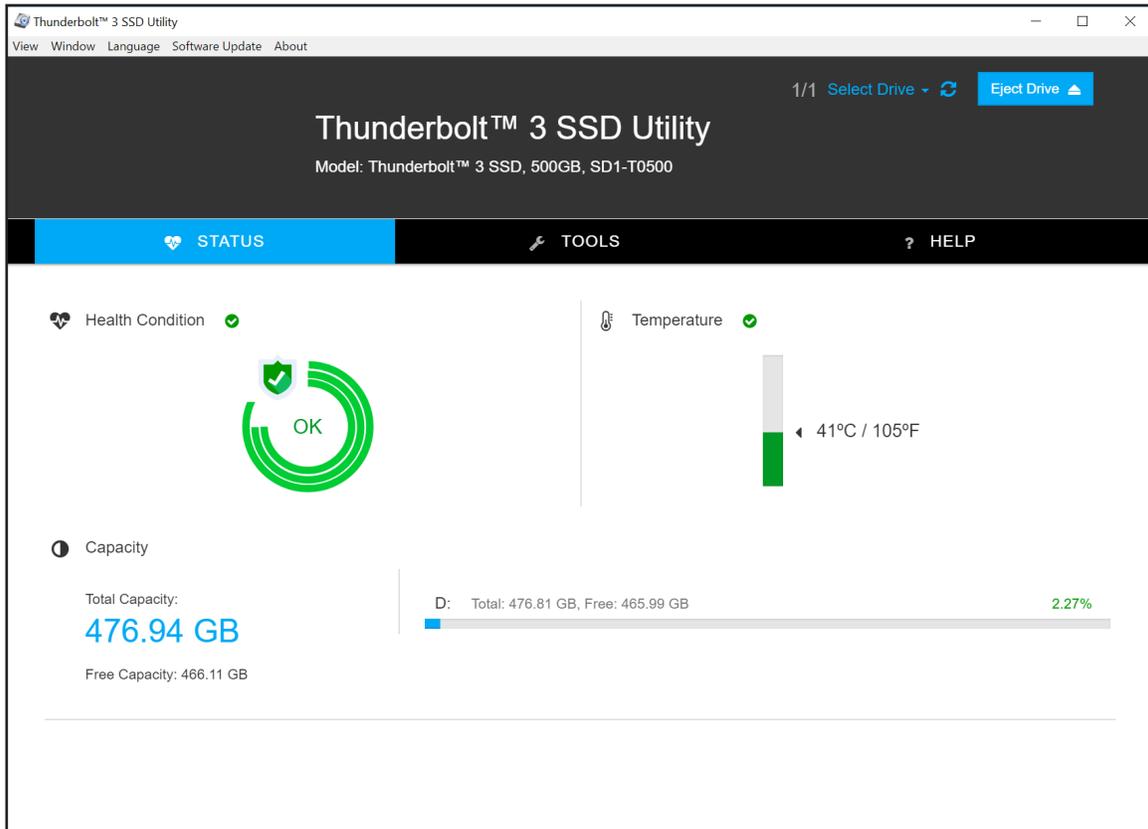
- 2 Double-click on the Thunderbolt™ 3 SSD Utility installation file located on the drive. Follow the instructions that appear.



Using the Thunderbolt™ 3 SSD Utility

Drive Status

The Status tab displays when the utility is launched. This is useful for checking how much storage capacity is available and provides information useful for troubleshooting.



Tools

Security

Security is not enabled by default. When you use this security feature to lock the drive, you will create a password that must be entered to unlock it. The locked status continues after the drive is disconnected. That is, when the drive is connected again, you need to enter the password to unlock the drive.

Each time you lock the drive, you need to complete the procedure to create a password. You can use the same password used in previous sessions.



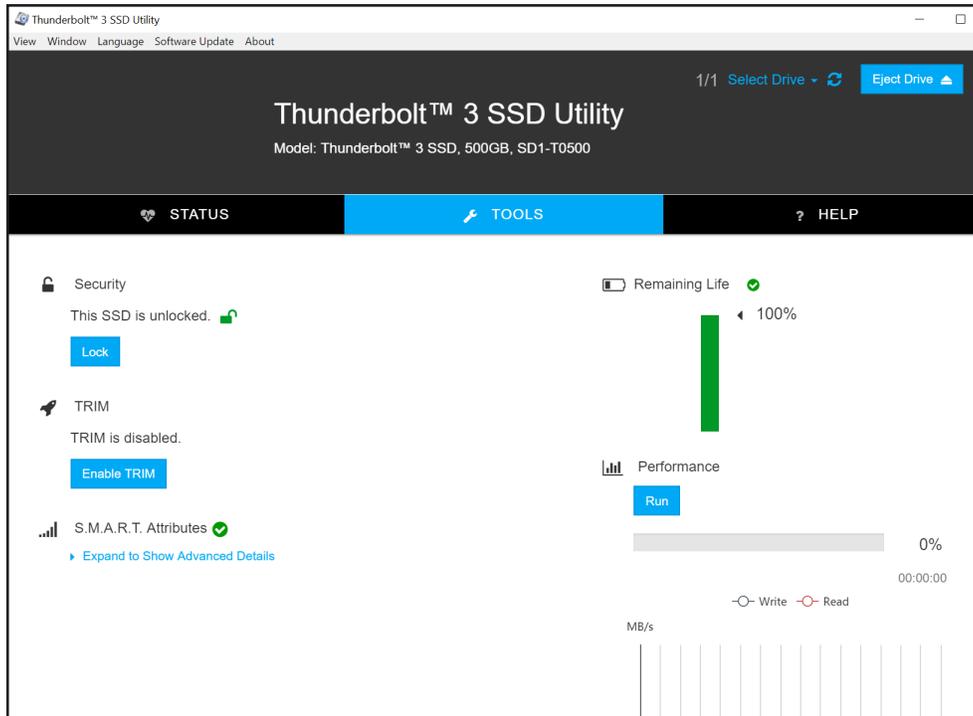
CAUTION: Also keep in mind that you must remember this password to unlock the drive. There is no way to unlock the drive if you forget the password. It will be necessary to reset the drive if you forget your password. This means you will lose any data on the drive.



NOTE: When you lock the drive, you must create a password. Set a password that you can remember easily to unlock the drive.

Locking the solid state drive

- 1 To lock the drive, go to the Tools menu and click on the **Lock** button. A new menu appears.
- 2 Enter the password used to unlock the drive. Use a password that is difficult to guess, but one that you can remember. You cannot unlock the drive without the password. Retype the password in the space provided.



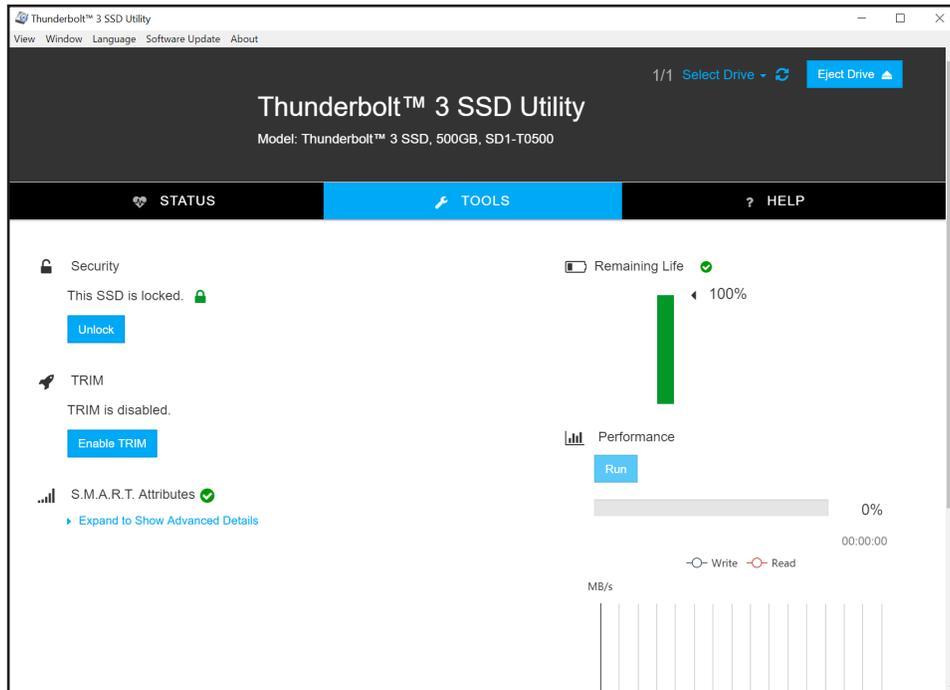
- 3 Click on the **Submit** button to create the password and put the drive into locked status.

The screenshot shows a "Lock SSD" dialog box. It contains the following fields and buttons:

- Device: SD1-T0500
- Password: [*****]
- Retype Password: [*****]
- Buttons: Submit, Cancel

Unlocking the drive

- 1 To unlock the drive, go to the Tools menu and click on the **Unlock** button. A new menu appears.



- 2 Enter the password used to unlock the drive and click on the **Submit** button.



Unlocking the drive with PSID



CAUTION: All data and password on the SSD will be erased, if unlock by PSID.



NOTE: The PSID is printed on the bottom of the Dell Portable Thunderbolt™ 3 SSD, and on a sticker located inside the box shipped with the device. The sticker can be peeled off and placed as per your preference.

If the password is forgotten, enter the PSID used to unlock the drive and click on the **Submit** button.

Erase Recovery with PSID ×

[Unlock SSD](#) Erase Recovery with PSID

WARNING: This operation will erase all data and reset to default unlocked state

Device: SD1-T0500

PSID: - - -

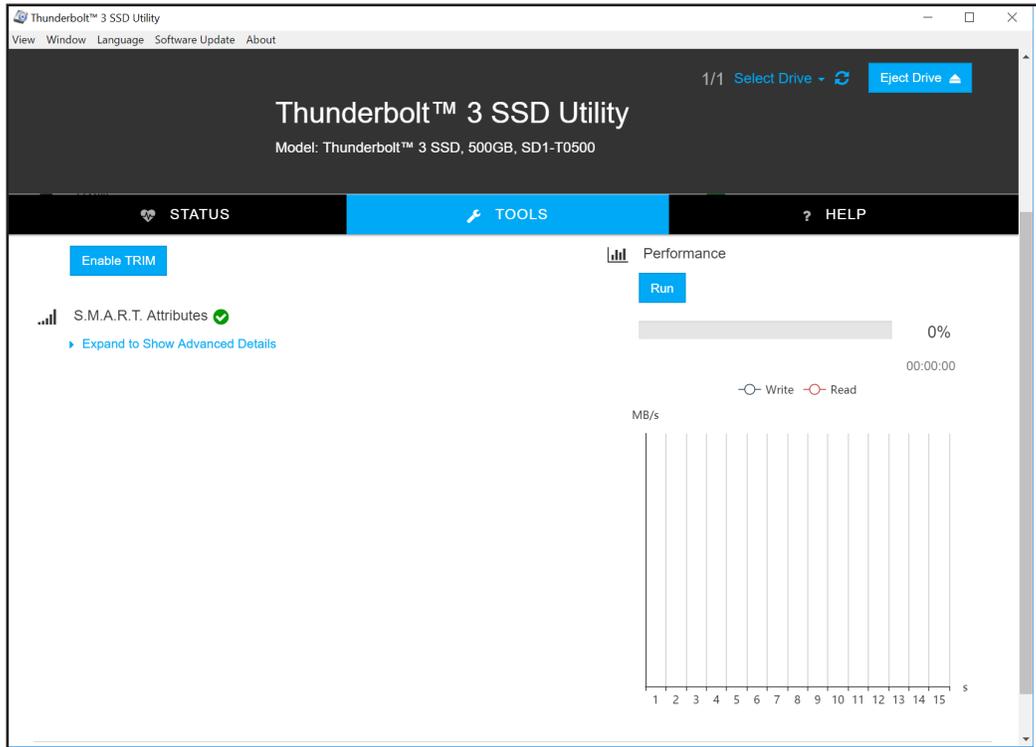
Safely removing the solid state drive using the Thunderbolt™ 3 SSD Utility

To safely remove the SSD using the Thunderbolt™ 3 SSD Utility, open the utility and click on the **Eject Drive** button at the top of the menu interface.



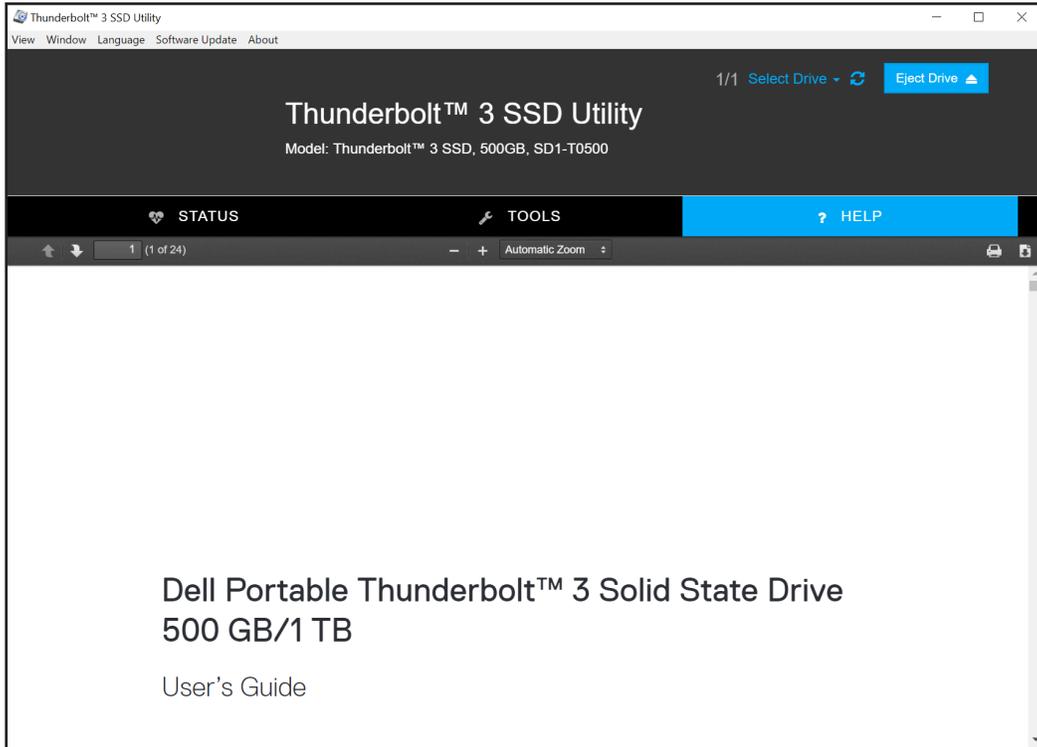
Performance

Use the Performance tab to test drive speed.



Help

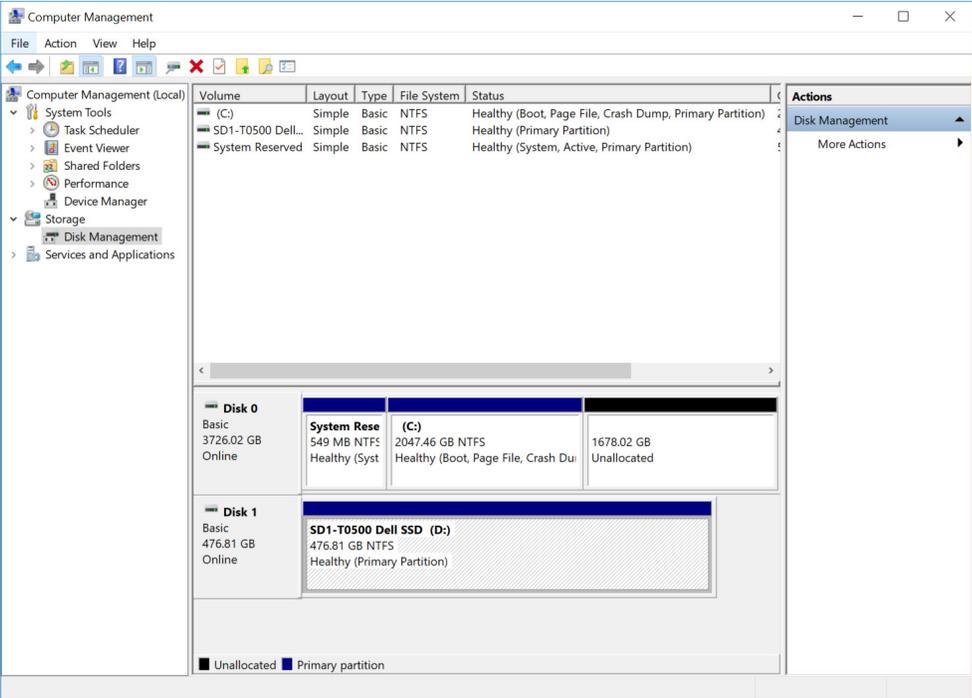
Use the Help tab to view documentation and help information for the SSD.



Managing the solid state drive in Windows

You can use Windows Administrative Tools to partition or change the file system on the Dell Portable Thunderbolt™ 3 SSD.

Go to **Control Panel (View by Small/Large icons) > Administrative Tools > Computer Management > Storage > Disk Management** to access the Windows Disk Management interface.



Troubleshooting

Common symptoms

The following table contains information about common symptoms you might encounter and the possible solutions.

Problems

Possible Solutions

I cannot see Dell SSD Disk Volume when I insert Dell Portable SSD. What should I do?

Check the below items.

- 1 Thunderbolt™ 3 USB-C connector and Thunderbolt™ 3 Cable
 - Look for the Thunderbolt™ lightning bolt logo on the platform. The port looks identical to the USB-C, but it is a Thunderbolt™ 3 connector.
 - Thunderbolt™ 3 cable should have a Thunderbolt™ lightning bolt logo with the numeral 3.
- 2 Thunderbolt™ 3 Software
 - a. Make sure that Thunderbolt™ 3 software is installed and running. If the software is running, the Thunderbolt™ 3 software icon appears in the Windows System Tray.
 - b. To check if the Dell Portable SSD is detected and approved on the Thunderbolt™ software.
 - Click on the right button of your mouse on software icon.
 - Check devices on View Attached Devices / Approve Attached Devices (Always Connect) / Manage Approved Devices.
- 3 Disk Management
 - a. Is the Dell Portable SSD Disk detected?
 - If Disk is detected, check item 3(b) and 4.
 - If Disk is NOT detected, check item 5, 6, and 7.
 - b. The file system of Dell Portable SSD should be supported by the OS.

Problems

I cannot see Dell SSD Disk Volume when I insert Dell Portable SSD. What should I do?(continued):

Possible Solutions

- 4 Security Locked

Install SD1-TSeries Portable SSD Utility first to check the security status of Dell Portable SSD. It can be unlocked by the Utility.

 - Open the Utility.
 - Go to page TOOLS.
 - Press the Unlock button.
 - Input the password on Unlock SSD page, then Submit.
- 5 Device Manager
 - a. View -> Devices by Type -> Disk drives
NVMe SSD of Dell Portable SSD detected or not detected.
 - b. View -> Devices by Type -> Storage Controllers
Driver of NVM Express Controller of Dell Portable SSD is loaded or not loaded.
If not, check item 6.
 - c. View -> Devices by Type -> System devices
Thunderbolt™ Controller - 1575 of Dell Portable SSD is detected normally or not.
- 6 Device Status shows “Resource is not enough” in Device Manager
System BIOS is responsible to allocate the memory resources for attached devices. Contact the manufacturer of the notebook or motherboard.
 - Right-click your mouse on NVM Express Controller.
 - Choose Properties item.
 - Go to General page.
 - Check the description on Device Status.
- 7 Power Shortage
 - a. Remove other Thunderbolt™ accessories and insert the SSD as the First (Primary) plug-in device to a Thunderbolt™ 3 port on the computer.
 - b. Install SD1-TSeries Portable SSD Utility first to diagnose the power supply for Dell Portable SSD automatically. If there is power shortage problem, a pop-up menu warns the user of the problem.

Problems

Possible Solutions

Nothing displays when I launch the SD1-TSeries Portable SSD Utility.

The user must have administrator privilege to open Utility. Login as administrator and open the Utility.

What can I do if I forget the password for security function?

- 1 Look for PSID on Product Label.
- 2 Open the Utility.
- 3 Go to page TOOLS.
- 4 Press the Unlock button.
- 5 Input the PSID to the page **Erase Recovery with PSID**, then Submit.



NOTE: The data and password on SSD will be erased, if the SSD is unlocked by PSID.

What should I do if the “Remaining Life” is showing a warning message

Remaining Life refers to the endurance of the NAND flash. This is calculated by how much data has been written to the flash. It is a value estimated by the flash manufacturer.

If a warning message displays for the Remaining Life, to avoid data loss, it is recommended to back up any important data in the drive. If the Dell Portable SSD is still under warranty, it can be returned to the manufacturer. A Return Merchandise Authorization (RMA) order is required.

Problems

Possible Solutions

What are the consequences if I turn off the TRIM function?

It is likely that you will not get the optimal performance. Other SSD installed on your system with NTFS will be affected as well.

How to change Windows Disk volume to Mac platform?

- 1 Open Disk Utility on Mac platform.
- 2 Erase Dell Portable SSD to macOS supported File System.



NOTE: Converting the file system will erase the entire contents of the drive. All data currently on the drive will be lost.

How to change Mac Disk volume to Windows platform?

- 1 Open Command Prompt and execute diskpart to clean Dell Portable SSD.
- 2 Open Disk Management.
- 3 Initialize disk.
- 4 New volume for Dell Portable SSD.



NOTE: Converting the file system will erase the entire contents of the drive. All data currently on the drive will be lost.

Problems

What should I do if BSoD (Blue Screen of Death) with Stop Code 0x000001A, MEMORY_MANAGEMENT, after hot-plugging the Dell Portable SSD on Windows Platform?



NOTE: There is a very low probability of this occurring. However, if it happens, it will keep happening until the problem is corrected.

Possible Solutions

Dell Portable SSD should be safely removed using the Eject icon in the Windows System Tray or by SD1-TSeries Portable SSD Utility. Removing the Dell Portable SSD without following the proper eject procedure, then hot-plugging the Dell Portable SSD can cause the operating system BSoD. However, the SSD should still work well after a COLD BOOT together with your Windows platform.

To repair Dell Portable SSD and resolve the BSoD problem:

- 1 Connect the Dell Portable SSD to powered off Windows platform.
- 2 Power on the platform.
- 3 Back up data to another drives.
- 4 Format Dell Portable SSD.

Problems

What should I do if the Dell Portable SSD cannot be accessed after hot-plugging the Dell Portable SSD on Mac Platform?



NOTE: There is a very low probability of this occurring. However, if it happens, it will keep happening until the problem is corrected.

Possible Solutions

Removing then hot-plugging the Dell Portable SSD can cause the Dell Portable SSD to be undetected or inaccessible. The SSD should still work after a cold boot on a Mac platform.

Symptoms of failed detection:

- 1 No Volume of Dell Portable SSD can be accessed.
- 2 Under System Information, Driver Installed status is No.

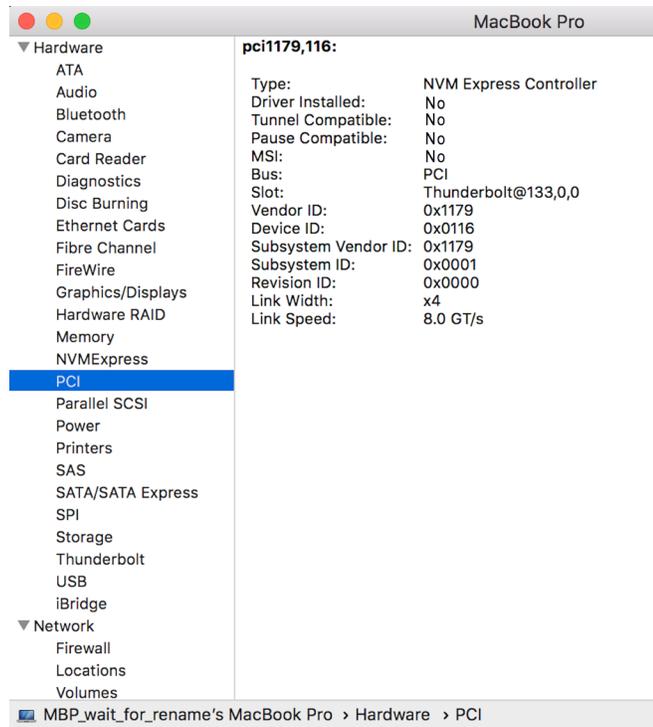
For example:

System Information->Hardware->PCI

pci1179,116:

Type: NVM Express Controller

Driver Installed: No



Problems

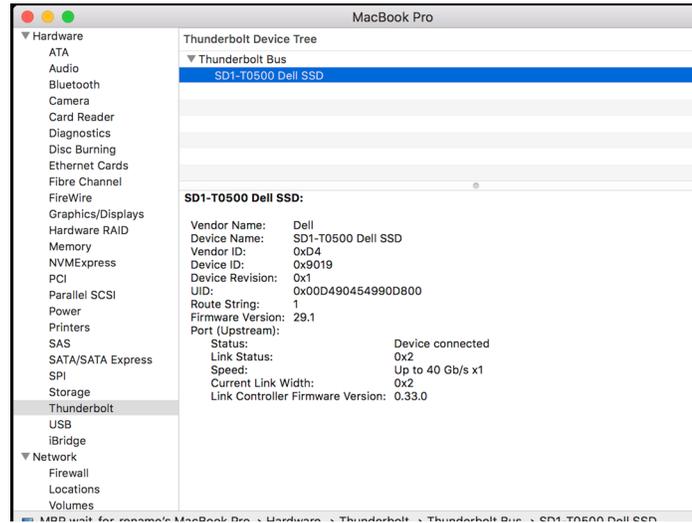
What should I do if the Dell Portable SSD cannot be accessed after hot-plugging the Dell Portable SSD on Mac Platform?
(continued)

Possible Solutions

- 3 Under System Information, Thunderbolt™ bus would have the value SD1-T1000 Dell SSD / SD1-T0500 Dell SSD.

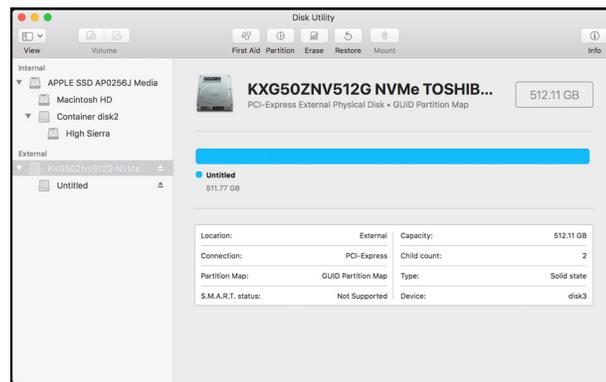
For example:

System Information->Hardware->Thunderbolt™ Bus->SD1-T1000 Dell SSD



To repair Dell Portable SSD and resolve the access problem:

- 1 Connect the Dell Portable SSD to a powered off Mac Computer.
- 2 Power on the platform.
- 3 Back up data to another drive.
- 4 Open Disk Utility.
- 5 Click View -> Show All Devices.
- 6 Unmount the volume of Dell Portable SSD.
- 7 Erase “KXG50ZNV512G NVMe TOSHIBA 512GB Media” or “KXG50ZNV1T02 NVMe TOSHIBA 1024GB Media” to macOS supported File System.



Specifications

General

Model number	SD1-T0500, SD1-T1000
Storage Media	1TB NVMe SSD (SD1-T1000) 512GB NVMe SSD (SD1-T0500)
Connection Interface	Thunderbolt™ 3

Rating

Operating Voltage	5V (2.4A)
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Physical characteristics

Weight	61 gm (2.1 oz)
Dimensions	
Length	98.8 mm (3.89 in)
Width	48 mm (1.89 in)
Height	19 mm (0.75 in)

Environmental

Operating temperature	0°C (32°F) to 35°C (95°F)
Operating humidity	<95% relative humidity (non-condensing)

Certificates	CE, VCCI, FCC, ACMA, IC, NRTL, CB
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Warranty	Three-year limited warranty
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NOTE: For more information about Dell Warranty and Support Policy go to [Dell.com](https://www.dell.com).

System Requirements	Desktop or notebook computer with a Thunderbolt™ 3 port and one of the following operating systems:
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- Windows 10 x64
- Mac OS X 10.13 or later



NOTE: Speed varies depending on host hardware, software, usage, and storage capacity.

Statutory information

Warranty

Limited warranty and return policies

The Dell Portable Thunderbolt™ 3 SSD, carry a 3-year limited hardware warranty. If purchased together with a Dell system, it will follow the system warranty.

For U.S. customers:

This purchase and your use of this product are subject to Dell's end user agreement, which you can find at [Dell.com/terms](https://www.dell.com/terms). This document contains abiding arbitration clause.

For European, Middle Eastern and African customers:

Dell-branded products that are sold and used are subject to applicable national consumer legal rights, the terms of any retailer sale agreement that you have entered into (which will apply between you and the retailer) and Dell's end user contract terms. Dell may also provide an additional hardware warranty—full details of the Dell end user contract and warranty terms can be found by going to [Dell.com](https://www.dell.com), selecting your country from the list at the bottom of the “home” Page and then clicking the “terms and conditions” link for the end user terms or the “support” link for the warranty terms.

For non-U.S. customers:

Dell-branded products that are sold and used are subject to applicable national consumer legal rights, the terms of any retailer sale agreement that you have entered into (which will apply between you and the retailer) and Dell's warranty terms. Dell may also provide an additional hardware warranty – full details of Dell's warranty terms can be found by going to [Dell.com](https://www.dell.com), Selecting your country from the list at the bottom of the “home” page and then clicking the “terms and conditions” link or the “support” link for the warranty terms.