



Samsung Portable SSD T5

User Manual

MU-PA250

MU-PA500

MU-PA1T0

MU-PA2T0



LEGALITIES

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Samsung Portable SSD T5

User Manual

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Introduction

Samsung Portable SSD T5 is the latest innovation in external storage enabling you to enjoy extraordinary speeds, and a sleek and solid form factor, secure data protection and multi-device flexibility. It is a whole new experience for your data storage needs, professional or personal.

Industry-leading Speed

Samsung, a world leader in Memory technology, has pioneered and revolutionized external storage with the extraordinarily fast Samsung Portable SSD T5, offering transfer speeds of up to 540 MB/s.

Sleek and Solid External Storage

The lightweight and pocket-sized Samsung Portable SSD T5 comes with a shockproof aluminum exterior, and makes it easy to access up to 2TB of data anywhere. Its shock-resistant internal frame can withstand accidental drops of up to two meters (6.6 feet)*.

Secure and Convenient

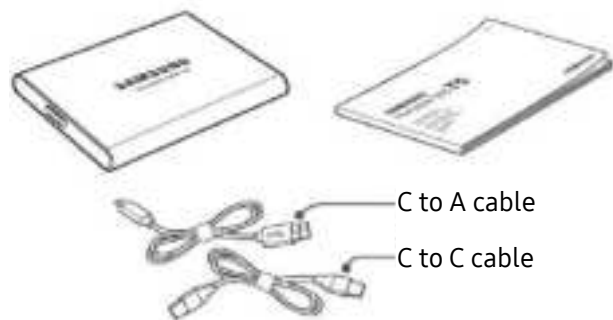
Samsung Portable SSD T5 enables users to seamlessly and securely store, access and transfer data across multiple Operating Systems and devices with Password protection software based on AES 256-bit hardware encryption. Samsung Portable SSD T5 comes with the latest USB Type-C port and two types of connection cables (USB Type-C to C and USB Type-C to A) make it easy to use.

Getting Started

Before using the Samsung Portable SSD T5 (referred to as “T5”), please read this User Manual thoroughly so that you may know how to use the product in a safe and appropriate manner.

What’s In the Box

- Portable SSD T5
- USB 3.1 USB-C to A cable
- USB 3.1 USB-C to C cable
- Quick Start Guide/Warranty Statement



How to Connect

Select the cable compatible with your device. Connect one end of the cable to the device and the other end to the T5.



C to C cable



C to A cable

System Requirements

1. USB 3.1 Gen 2 (10 Gbps) or USB 3.1 Gen 1 (5 Gbps) Interface Support

USB (Universal Serial Bus) is a serial input/output interface standard for connecting various devices. T5's data transfer speed is optimal with USB 3 (USB 3.1 Gen 2 and USB 3.1 Gen 1, collectively referred to as "USB 3"), and using lower versions such as USB 2.0 and 1.1 may result in lower performances due to interface limitations inherent in such lower versions.

* Performance may vary depending on user's system to which T5 is connected. Even when using USB 3.0 connections, T5 may not perform well if your system does not support UASP (USB Attached SCSI Protocol). Please make sure that your system supports UASP.

2. Recommended Operating Systems for Using Security Software

To enjoy security software for T5, we recommend the operating system ("OS") meeting the following requirements:

- Windows OS: Windows 7 or higher
- Mac OS: Mac OS X 10.9 or higher
- Android: Android KitKat (ver. 4.4) or higher

3. File Formats

T5 is pre-formatted in using exFAT file system which is supported by Windows OS, Mac OS, and Android operating systems. Whether data formatted to a certain format may be read or written to your computer vary depending on the OS, as specified in the table below. If you use T5 on a single OS, it is recommended that you format the T5 using the appropriate file format for that OS. (e.g.)

Read/write restrictions for file systems by each operating system

File Formats	Windows OS	Mac OS
exFAT	Both read and write	Both read and write
NTFS	Both read and write	Read only
HFS	Not recognizable	Both read and write

* When using exFAT across multiple operating systems, data writing may become locked and you may only be able to read data. If such problem occurs, you can restore write access by following the instructions below.

- Mac OS: Connect T5 to your Mac again, and perform Eject.
- Windows OS: When the notice pops up saying that write access is disabled, click "Scan and fix" to perform Check Disk (CHKDSK). If you did shut down the notice without performing Check Disk, you may do it by selecting the drive → Right-click → Properties → Tools → click Check.

4. Capacity of T5 Displayed on the System

The capacity reported by the system to which T5 is connected may differ from the labeled capacity, due to the difference between the decimal and binary systems of measurement and other factors including the drive's partitioning and blocking.

* e.g.: Windows OS: 1 GB = 1024MB, Mac OS: 1GB = 1000MB

Labeled capacity uses decimal system and is convertible as below:

1 GB=1,000,000,000 bytes, 1 TB=1,000,000,000,000 bytes

Lower capacity may be demonstrated by your computer due to use of a different measurement standard.

Using T5

Using T5

1. Connecting T5

Select the cable compatible with your device. Connect one end of the cable to the device and the other end to the T5.

2. Installing Samsung Portable SSD Software (For Password protection and Firmware update)

For PCs and Macs

A. Running Samsung Portable SSD Software

In the Explorer (Windows OS) or Desktop (Mac OS), select the "Samsung Portable SSD" application.

Windows OS: SamsungPortableSSD_Setup_Win.exe

Mac OS: SamsungPortableSSD_Setup_Mac.pkg

* If you format partition of the T5 after purchase, Samsung Portable SSD Software stored in the drive will be deleted. In such case, please download the "Samsung Portable SSD" application from Samsung website (<http://www.samsung.com/portable-ssd>) and set a password.

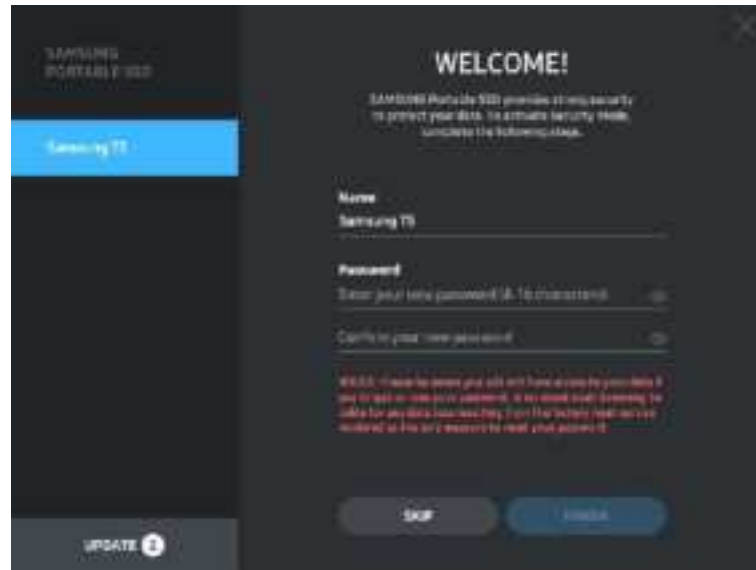
* Installation of Samsung Portable SSD Software for T5 will automatically remove previous version, if remaining in your computer, which was designed for T3.

* Samsung Portable SSD Software may not operate without device (driver) enabled.

B. Setting Password

* Password protection is optional. You may use T5 without security/update feature enabled.

Please follow the instructions that appear on each screen of the Samsung Portable SSD Software. Once you agree to the terms and conditions of the Samsung Portable SSD Software while it is being installed, you can set a password through the following steps. (Certain elements of Samsung Portable SSD Software will be installed on the user's computer for password protection.)



* Samsung shall not be liable for loss of user data caused by forgotten or stolen passwords. In an effort to keep the device as secure as possible, there is no password recovery option. If the password is forgotten, users need to have T5 to be restored to factory setting through online service rendered by our customer service centers. Please keep it in mind that all user data placed in T5 will be lost by factory reset and be cautious not to forget or misplace your password.

* Only Mac OS, "Samsung Portable SSD" driver is required for the security functionality. If the kernel extension is not installed, complete the installation by following the sequence on the package installation. Once installed, disconnect and reconnect T5 to confirm that the installation was successful.

* Only Mac OS, "Samsung Portable SSD" driver and some of 3rd party drivers, including SATSMARTDriver are mutually exclusive. If you wish to work with SATSMARTDriver, please remove Samsung Portable SSD driver and install SATSMARTDriver as following instruction.

* When both Samsung Portable SSD Driver and SATSMARTDriver are installed and conflict is detected, the instructions like the following will be available:

How to remove Samsung Portable SSD Driver and install SATSMARTDriver

```
#sudo kextunload /System/Library/Extensions/SamsungPortableSSDDriver.kext
```

```
#sudo kextload /System/Library/Extensions/SATSMARTDriver.kext
```

How to remove SATSMARTDriver and install SamsungPortableSSDDriver

```
#sudo kextunload /System/Library/Extensions/SATSMARTDriver.kext
```

```
#sudo kextload /System/Library/Extensions/SamsungPortableSSDDriver.kext
```

C. Unlock T5

If you've enabled password protection, every time you connect T5 to your computer you need to enter your password and click the "UNLOCK" button before getting access to the data in T5. If you fail to type correct password, your access will be confined to capacity of about 128MB allocated to SamsungPortableSSD.exe and SamsungPortableSSD.app, which means that you will be locked out of the data protected by password.



Home Screen



* Depending on the user environment, the "SamsungPortableSSD Software" may not be executed automatically. In such case, please double-click the "SamsungPortableSSD Software" icon in Explorer on Windows or the Desktop on Mac.

* Password protection may be supported by each OS' certain version or higher only. Please check whether your OS meets the system requirements and supports password protection.

* If password protection is enabled, only the capacity of security partition in the T5 will be initially displayed. In case of Windows 7, the size is approximately 128 MB. Once you enter your password and unlock successfully, the full capacity of T5 will be displayed in your system.

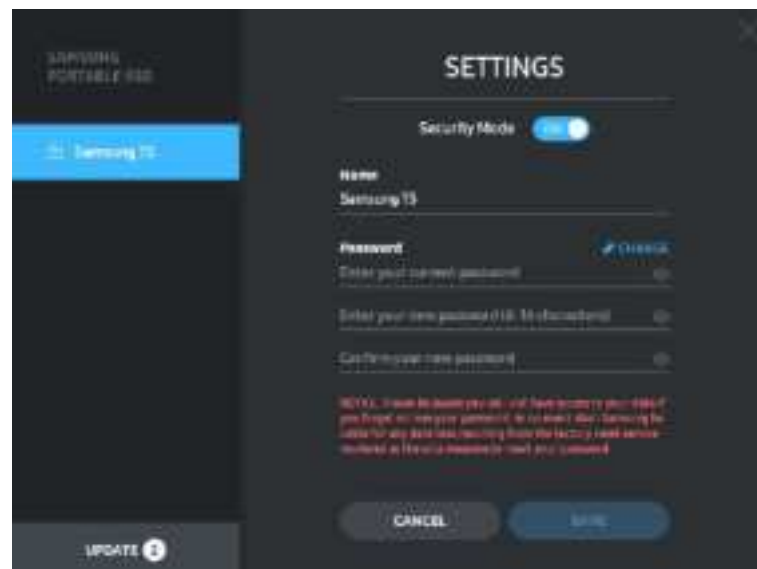
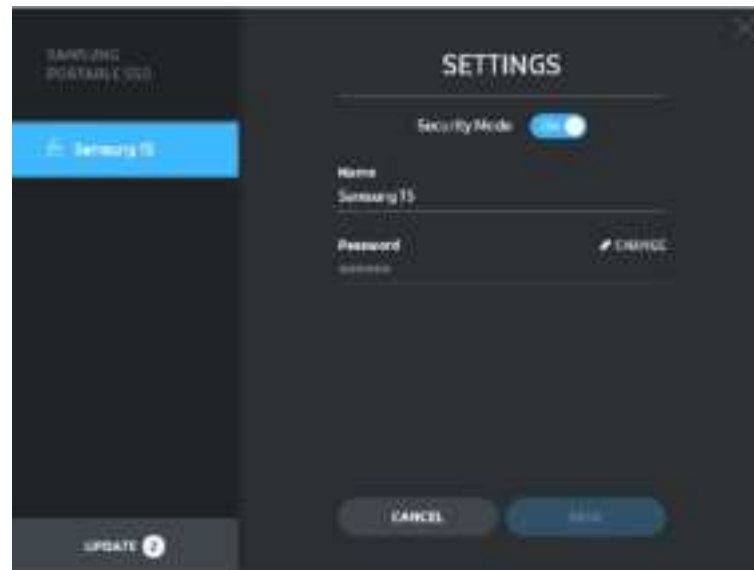
* You may choose another Samsung Portable SSD by clicking T5's name on left panel. Samsung Portable SSD Software lists the entire host devices (up to 6) to which Samsung Portable SSD is connected.

D. Change in Settings

- Running Samsung Portable SSD Software for settings on Windows OS and Mac OS

You can change your user name/password/security mode of the T5 by clicking "SETTINGS" button on the main page. When using a computer without the security software, you can download installation file ("SamsungPortableSSD_Setup_Win.exe" for Windows OS, "SamsungPortableSSD_Setup_Mac.pkg" for Mac OS) from the Samsung website (<http://www.samsung.com/portable-ssd>) and install it to change the settings.

SETTINGS



You may change user name, password and security mode. For changing password, please click “CHANGE” button.



For making a change in security mode between ON and OFF, please click toggle button and enter correct password.

Refer to the table below for a description of T5 security status indicator.

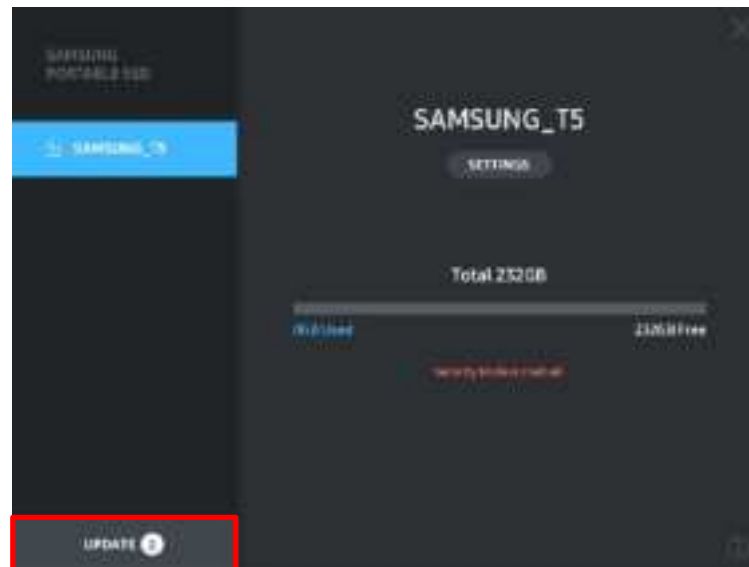
Status		Description
	Locked	This signifies that security mode is on, but user has not unlocked T5. You can unlock T5 on unlock page.
	Unlocked	This signifies that security mode is on and user has already unlocked T5. You can see the storage capacity on main page and change settings.
No icon	Security mode OFF	This is when security is OFF. You can see the storage capacity on main page and change settings.

How to execute “Samsung Portable SSD” application

Select “Samsung Portable SSD” application icon on Desktop.

E. Update SW and FW

If your computer is connected to the internet, the number of SW/FW updates available will show on the bottom of left panel.



By clicking “UPDATE” button () , you may go to update page.

Update page



By clicking “UPDATE” button () , you can download the latest software (“SW”) or firmware (“FW”) and update it.

By clicking “Check for Update Automatically” toggle button () , you can choose whether to have SW and FW automatically updated whenever Samsung Portable SSD is connected.

By clicking refresh button () , you can refresh update status.

By clicking arrow down button () , you can see detail information on the applicable update.

*When user changes “Check for Update Automatically” from OFF to ON, SW doesn’t refresh update information immediately. Update information is refreshed when either user clicks refresh button or Samsung Portable SSD is connected to the computer.



* For FW updates, security mode needs to be OFF. Any access to T5, including copying/deleting/formatting partition, while FW is being updated, may cause abnormal behavior of or damage to the T5.

* Once FW has been updated, please disconnect and reconnect T5 to ensure that the FW update was successful.

F. Delete “Samsung Portable SSD” Software

Deleting software on each OS

Computer OS		Description
Windows OS	If user installed SW using SamsungPortableSSD_Setup_Win.exe	Software can be uninstalled via “Uninstall or change a program”. Go to Control panel → Programs → Programs and Features → Uninstall or change a program → Double-click “Samsung Portable SSD Software” and select “Yes”
	If user installed SW using SamsungPortableSSD.exe	Software need to be deleted manually by executing PSSD_Cleanup.bat in application installation path. (Normally c:\ProgramData\Samsung Apps\Portable SSD\PSSD_Cleanup.bat) Please refer to FAQ in the Samsung website (http://www.samsung.com/portable-ssd) for more details.
Mac OS		Software needs to be deleted manually by executing CleanupAll.scpt in SW installation path. (Normally #osascript ~/Library/Application Support/PortableSSD/CleanupAll.scpt) *Third party cleaner such as AppCleaner may not delete “Samsung Portable SSD” SW completely. Please refer to FAQ in the Samsung website (http://www.samsung.com/portable-ssd) for more details.

G. Select SW Default Language

Default language may be selected under Regional Setting.

For Android devices

A. Download Application from Google Play Store

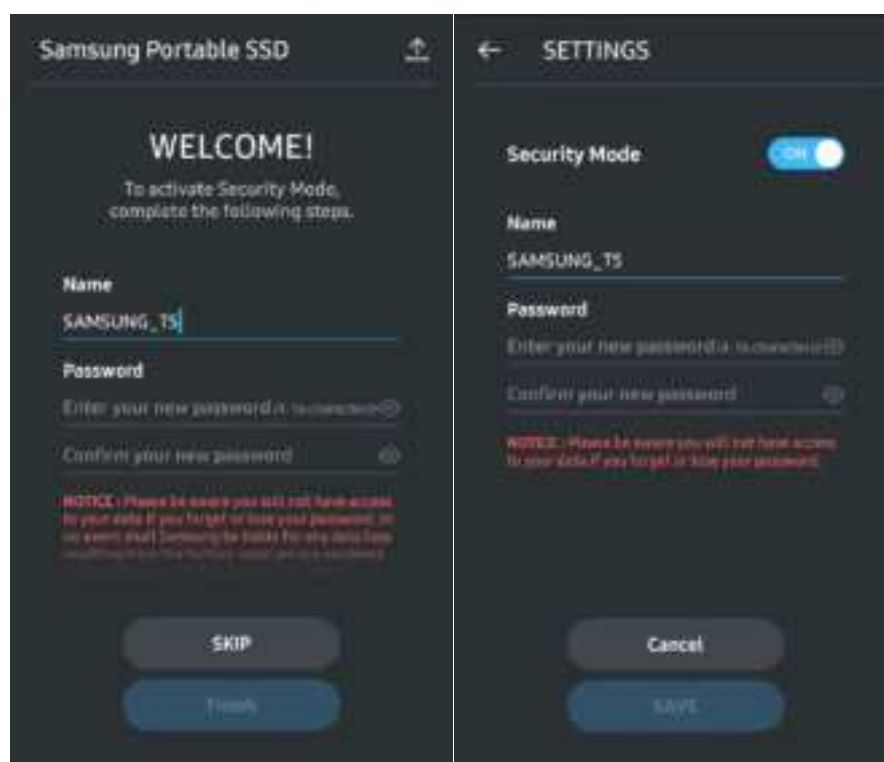
You may download "Samsung Portable SSD" application from App store.

B. Running the Application

Please run the Application installed.

C. Setting Password

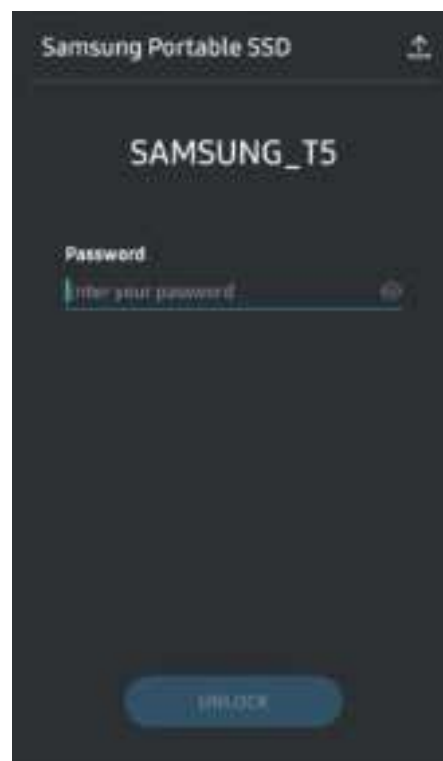
Setting a password is easy. You may use the same password saved in T5 for computer and Android.



* Samsung shall not be liable for loss of user data caused by forgotten or stolen passwords. In an effort to keep the device as secure as possible, there is no password recovery option. If the password is forgotten, users need to have T5 to be restored to factory setting through online service rendered by our customer service centers. Please keep it in mind that all user data placed in T5 will be lost by factory reset and be cautious not to forget or misplace your password.

D. Unlock T5

If you've enabled password protection, every time you connect T5 to your computer you need to enter your password and press the “UNLOCK” button before getting access to the data in T5.



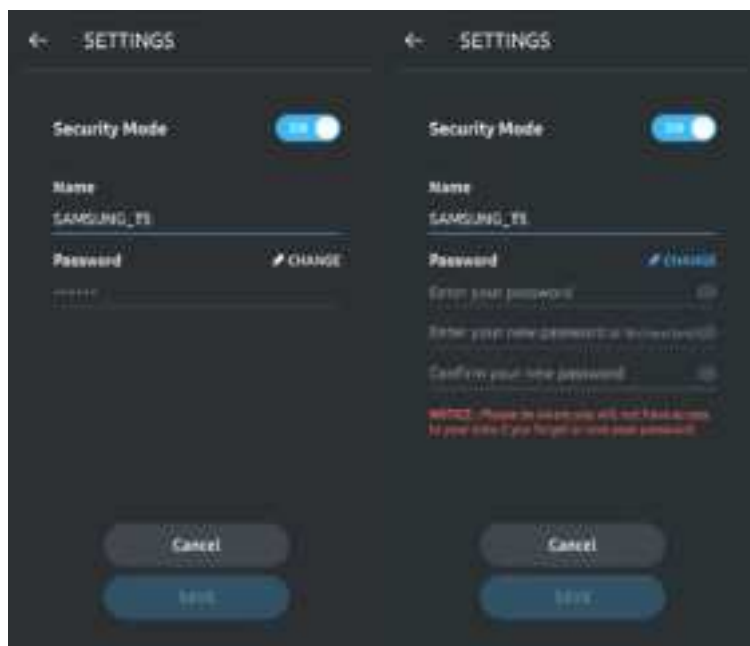
E. Home Screen

If password protection is not enabled in your T5, you can enter to Setting screen by clicking one of the two areas.



F. Settings Screen

You can change the user name of T5 or password, and turn ON/OFF security mode. For changing password, please click "CHANGE" button.



G. Update SW and FW

To enter the update screen, click the Update page button () on Home screen.

Update Screen

If any update is available, the “UPDATE” button () will be highlighted.

If there is an application to be updated, your clicking UPDATE button will show the link to ‘App store’.

* Firmware update requires connection to computer.



H. Deleting “Samsung Portable SSD” Application on Android

Open your android device's Settings app and tap Apps or Application manager. Tap “Samsung Portable SSD” and uninstall.

I. Select Default Language

Default language may be selected under Android system language setting.

* Path: Android apps - Settings - Language

3. Removing Safely from Computer

When disconnecting T5 from your computer, please use the Safely Remove Hardware feature to protect your data against possible damages.

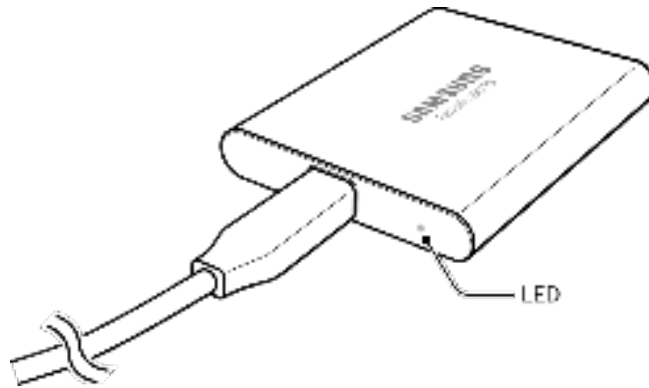
* Unplugging from computer without performing activating Safely Remove Hardware feature may cause data losses or damages to the T5. Please be sure to use Safely Remove Hardware feature for every disconnection. Samsung shall not be liable for loss of user data or product damages caused by user's failure to comply with this instruction.

How to Safely Removing Hardware under each OS

Computer OS	Description
Windows OS	Once Safely Remove Hardware is selected from the tray, select the device you wish to remove and click Eject. Once the device is removed safely, you will be notified by the OS. Remove the cable after the activity indicator LED on the product turns red and then turns off.
Mac OS	Right-click on the T5 icon, and select Eject or drag the icon to the Trash to safely remove the product. Remove the cable after the activity indicator LED on the product turns red and then turns off.

Understanding the LEDs

The following table describes T5 Status LED behavior.



Status	LED Behavior
Plugged in / Idle	Solid blue
Read / Write	Blinking blue
Safely Remove / Computer Sleep Mode	Blinking red 1 time

Caution

Failure to follow cautions in each section of this manual may result in injury, damage to the product or data loss. Please read thoroughly before using the product.

Backing Up Important Data and Guarantees

Samsung Electronics does not guarantee the data stored on the T5 under any circumstances. Samsung Electronics denies any and all liabilities for psychiatric and/or physical damages or losses caused by loss or restoration of data stored on the T5. Be sure to back up important data at all times.

Guarantees Regarding Forgotten Passwords

Because T5 utilizes advanced encryption technologies, user data cannot be accessed if you forgot your password. Please write down your password and store it in a safe place. If the product cannot be used due to your failure to enter correct password, the only way to restore product is to have it reset to factory settings via an online service by a Samsung Service Center. However, restoring the device to factory settings will result in a complete loss of all user data. Please be sure to backup important data on a regular basis.

Compliance with Safety Standards and Connecting to Certified Devices

This product has been designed to comply with power consumption limitations according to safety standards. Please use devices and USB ports that comply with related standards.

Shock, Vibration

Please have the product avoid any strong shock or vibration that may cause malfunction or data loss.

Disassembly, Damage, Removal

Do not disassemble the product or damage or remove the stickers or labels on the product. If the product has been disassembled, damaged, or if the label has been removed by the user, all warranties will be void. For the purpose of repairs, please contact only Samsung Service Center or such service providers designated by Samsung.

Use of Genuine Accessories

Always use genuine parts and accessories certified by Samsung Electronics. Samsung Electronics shall not be liable for damages to the product or loss of user data caused by use of non-genuine parts or accessories.

Using the Product in Appropriate Temperature and Humidity

Use the product in appropriate environment: temperature between 5°C - 35°C and humidity between 10 - 80%.

Connecting to Devices Other Than a Computer or Android Device

Please check before use the guide given from the manufacturer or seller of the device you wish to connect the T5 for appropriate conditions and methods for the USB. Unexpected interference may cause the T5 and the connected device to malfunction. The T5 may not be supported by your device, depending on the file format systems or other factors related to system environments supported or adopted by your device. Please check the requirements of the USB mass storage supported by the device before using the T5.

Unplugging the Cable

Do not pull or unplug the cable using excessive force. It may cause an unstable connection or damage to the connector.

Virus Scans and Updates

Please follow the following safety guidelines to prevent virus infections.

- Install an anti-virus program on the computer or Android device to which the T5 is connected, and perform virus scans on a regular basis.
- Always update the operating system and the anti-virus software with the latest version.
- Perform virus scans on a regular basis to protect the T5 from being infected by a virus.
- After downloading files to T5 perform a virus scan before opening the file.

Cleaning the Product

It is recommended that you clean the product by wiping gently with a soft cloth. Do not use water, chemical substances or detergent. They may cause discoloration or corrosion in the product's exterior, and may also cause fire or electric shock.

Keep Away from Children, Infants and Pets

Small parts pose risk of suffocation. Please keep the product away from children, infants or pets to prevent them from putting the product or parts in the mouth. If a child is using the product, instruct and monitor the child on using the product correctly.

FAQ

I cannot run the Samsung Portable SSD Software.	The Samsung Portable SSD Software can only run on certain OS versions (or newer). Please see below for supported OS versions: • Windows OS: Windows 7 or higher • Mac OS: Mac OS X 10.9 or higher
The “USB storage unexpectedly removed” message appears on the status bar of my mobile device.	In order to use the Samsung Portable SSD Software, permission to access the USB device is required. This message appears when the access permission is removed from the mobile device. When you launch the mobile Samsung Portable SSD app, you can use the T5 normally again.
When I connect the T5 to devices other than a PC, they do not recognize the T5.	The T5 was developed for use with Windows OS and Mac OS PCs and mobile devices. When connected to devices other than those, the T5 may not be recognized or use of its features may be restricted depending on their level of support. Moreover, if you have enabled the Password Protection feature of the T5, you cannot enter your password from non-PC or non-mobile devices and thus will be unable to access data stored on the T5. Please disable the Password Protection feature before using the T5 with such devices.
I have lost my password. Can I disable the Password Protection feature?	No, you cannot. If you lose your password, you cannot disable the Password Protection feature or access updates. Therefore, make sure not to lose it.
My T5 is not recognized by devices.	Please make sure that the T5 is connected securely to the USB port. • Some PCs may not recognize the T5 when connected to the USB 2.0 port if the current exceeds the maximum limit (500 mA) described in the Power Specifications. In such cases, please try a different USB port. • If you use cables other than the one included in the product package, the T5 may not be recognized. If the T5 is correctly connected but still not recognized by devices, find the Service Centers specified in the User Manual or on the Samsung website (http://www.samsung.com/portable-ssd and http://www.samsung.com/support), and make an inquiry.

Product Specifications and Certifications

Product Specifications

Model	MU-PA250	MU-PA500	MU-PA1T0	MU-PA2T0
Capacity	250GB	500GB	1TB	2TB
Interface	USB 3.1 Gen 2 (10Gbps), backwards compatible			
Data Transfer Speed*	540 MB/s			
Dimensions	74 x 58 x 10.5 mm (3.0 x 2.3 x 0.4 inch) (L x W x H)			
Weight	51 g (1.8 oz.) (2TB)			
Recommended User's System Specifications	Windows 7 or higher; Mac OS X Mavericks, Yosemite, El Capitan, Sierra (10.9 or higher); or Android KitKat (version 4.4) or higher			

* Max data transfer speed is measured based on Samsung's internal testing standards with the enclosed USB cable. Performance may vary depending on host configuration. To reach maximum transfer speeds of 540 MB/s, the host device and connection cables must support USB 3.1 Gen 2 and UASP mode must be enabled.

Certifications



KC (Korea Certification)

Identification Symbol: Refer below

Name: Samsung Electronics Co., Ltd.

Manufacturer / Manufacturing Country: Samsung Electronics Co. Ltd / Republic of Korea

Manufacturing Year and Month: Marked separately

Rating / Model: Refer below

Manufacturer: SAMSUNG Electronics Co. Ltd.

Model	Rating		Identification Symbol
MU-PA250B	5V	0.8A	MSIP-REM-SEC-MU-PA2T0B
MU-PA500B MU-PA500G MU-PA500R	5V	0.8A	
MU-PA1T0B MU-PA1T0G MU-PA1T0R	5V	0.8A	
MU-PA2T0B	5V	0.8A	

* This EMC compliant (Class B) device for homes is intended for use in domestic environment and can be used in any region.



FCC (Federal Communication Commission)

United States Federal Communication Commission (FCC) regulations

Note that any alteration or modification, not authorized expressly by the party responsible for compliance to regulations, may result in voiding user's authority to operate the device.



This equipment has been tested and verified to comply with FCC CFR Part 15, Restrictions on Class B Digital Devices.

These restrictions are implemented to prevent the emission of harmful electronic magnetic waves when device is used in residential environments. This device generates, uses and emits radio frequency energy, and may cause harmful radio interference to wireless communications if not installed and used according to the guideline. However, it does not guarantee absence of radio interference in certain installed environments. If harmful radio interference occurs to a radio or TV reception when the device is turned on or off, the user must prevent such interference through one of the following measures.

- Adjust direction of or relocate reception antenna
- Increase distance between the device and the receiver
- Plug receiver and device on outlets on separate circuits
- Seek assistance from qualified radio/TV technicians or retailer
- This device complies with Part 15 of FCC regulations
- This device does not cause electromagnetic interference
- If any interference is received, including interference that may cause operational problems to the device, it may be operated on two conditions that ensure normal operation. This product was designed for indoor-use only.

* FCC Notice: Note that any alteration or modification, not authorized expressly by the party responsible for compliance to regulations, may result in voiding the user's authority to operate the device.



CE (Conformity European)

Manufacturer's CE certifications

This product meets mandatory requirements and other related conditions of 2014/30/EU, 2014/35/EU and 2011/65/EU guidelines. This product was designed for indoor-use only.

Samsung Electronics

Samsung Service PO Box 12987, Dublin, Ireland

WEEE (Waste Electrical and Electronic Equipment)

This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.