

KIOXIA

SSD Utility

User Guide

Software Version 5.3

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Welcome!

SSD Utility enables you to manage and get the best out of your SSDs supported by the SSD Utility (hereinafter referred to as the “SSD”, “drive” or “device”).

Key features

SSD Utility enables you to:


- see a dashboard view of the status of your SSD
- see a detailed view of SMART attributes
- update SSD firmware and device drivers
- manage over provisioning
- secure erase data to make it unrecoverable
- assist technical support in diagnosing problems with views and logs of SSD, computer and SSD Utility details
- be alerted of issues with drive health, reliability or temperature
- run a quick benchmark to evaluate your drive performance

For more details of SSD Utility features, see SSD Utility Features on page 8.

System requirements

Supported SSDs include:

	Windows 10 x64	Windows 8.1 x64
EXCERIA PLUS G2 SSD	✓	
EXCERIA PLUS SSD	✓	
EXCERIA SSD	✓	
RD500 (TOSHIBA)	✓	
RC500 (TOSHIBA)	✓	
XS700 (TOSHIBA)	✓	✓

 **CAUTION:** before you start, make back-up copies of any data on the SSD that you want to keep; some operations result in the complete loss of data on the SSD (you are warned if this will happen).



Before using SSD Utility:

- The SSD Utility does not recognize any and all SSDs on hardware RAID or software RAID or Windows Storage. Also, the SSD Utility does not recognize any and all SSDs in driver environments other than the Windows Inbox Driver.
- You must run SSD Utility as an administrator
- For firmware updates, your computer must be connected to the internet
- If you have any problems with the operation of the SSD Utility, please contact Kioxia Customer Support (<https://personal.kioxia.com/support>).

Installing SSD Utility

This guide assumes that you have already correctly installed your SSDs. You can:

- Install SSD Utility in Windows
- Create a Bootable Media. This enables you to do some things that you cannot do from within your operating system. For example, for some SSDs you cannot update the firmware if it is the system boot drive
- Create a Bootable SSD Utility. This enables you to do some things that you cannot do from within your operating system. For example, for some SSDs you cannot do Secure Erase if it is the system boot drive.

Install SSD Utility in Windows

Windows - run the installer and follow the onscreen instructions.

Create a Bootable Media

You can use a USB flash drive to create a standalone bootable tool called Bootable Media which can be used on your computer to do a firmware update to your SSD of your SSD; the SSD Utility will only offer a Bootable Media if it is required – you should create the Bootable Media if prompted.

These instructions assume that you are familiar with the functionality of SSD Utility for firmware update



CAUTION: Before you start, make back-up copies of any data on the SSD and USB flash drive that you want to keep.

Also any data on the flash drive is erased during this operation.

USB flash drive capacity must be at least 128MB.

The USB flash drive is automatically formatted as FAT32, which ensures that any files saved onto the drive can be easily read from any Windows system.

If SSDs not supported by the SSD Utility (hereinafter referred to as the “unsupported SSDs”) are connected to your computer, the Bootable Media feature may not work properly. Please dismount unsupported SSDs from the computer before using the Bootable Media feature. Please contact KIOXIA Customer Support (<https://personal.kioxia.com/support>) if you have any problems with Bootable Media operation.

Start Bootable Media

1. Insert your USB flash drive into your computer, then restart your computer.
2. Set your BIOS to boot from your USB flash drive; see the relevant user documentation for your computer. If your BIOS supports both UEFI and legacy boot, select the legacy boot first. You only need to use UEFI boot if you experience any issues with legacy boot.
3. After the computer has booted, firmware updates are performed automatically.

Firmware Update:

This will automatically update the firmware on the SSD selected when the Bootable Media was created. The Bootable Media running a firmware update will provide a warning message and ask you to confirm the firmware update; please type yes to proceed.

After updating the firmware, please confirm that the firmware has been updated in SSD Utility by selecting "Update" from the task list under "Maintenance" in the options bar. If the firmware is not updated, please contact KIOXIA Customer support (<https://personal.kioxia.com/support>).



CAUTION: Do not turn off the computer until the update process is complete. Also, do not remove the USB flash drive and SSD running Bootable Media from the computer.

Remove Bootable Media from your USB flash drive

1. Insert the USB flash drive into a Windows computer.
2. Delete the USB flash drive volume and reformat it, which enables you to access the full drive capacity again.

Create a Bootable SSD Utility

You can use a USB flash drive to create a standalone bootable version of SSD Utility, which can be used on your Windows system and start SSD Utility. To create a bootable version of SSD Utility in Windows on a USB flash drive, run the standard SSD Utility software.

- 1 (See "UI overview" on page 6 for more information on the UI layout.) On the options bar, select Maintenance, then select Bootable SSD Utility in the task list.
- 2 Click Create.



CAUTION: before you start, make back-up copies of any data on the SSD and USB flash drive that you want to keep; any data on the flash drive is erased during this operation.

The USB flash drive must have a minimum capacity of 1 GB.

If SSDs not supported by the SSD Utility (hereinafter referred to as the "unsupported SSDs") are connected to your computer, the Bootable SSD Utility feature may not work properly. Please dismount unsupported SSDs from the computer before using the Bootable SSD Utility feature. Please contact KIOXIA Customer Support (<https://personal.kioxia.com/support>) if you have any problems with Bootable SSD Utility operation.

The USB flash drive is automatically formatted as FAT32, which ensures that any files saved onto the drive can be easily read from any Windows system.


When saving support packages from inside SSD Utility, they are saved by default in the support_packages folder on the USB drive.

Start SSD Utility

Windows operating system

A shortcut to SSD Utility is installed along with the application, for example in the Start menu under **KIOXIA Corporation - SSD Utility**. Click this to run SSD Utility.

Start Bootable SSD Utility

- 1 Insert your USB flash drive into your computer, then restart your computer.
 - 2 Set your BIOS to boot from your USB flash drive; see the relevant user documentation for your computer. If your BIOS supports both UEFI and legacy boot, select legacy boot first. You only need use UEFI boot if you experience any issues with legacy boot.
 - 3 At the start of the boot process, a menu is shown with the options SSD Support and SSD Support (Safe Mode). After a few seconds **SSD Support** is automatically selected.
 - 4 Once the computer has booted, SSD Utility automatically starts; see UI overview on page 6.
 - 5 To update your SSD firmware from the internet when your PC is connected using a wireless interface, you must configure your wireless settings to allow the update. If you do not have a wired network connection, you are prompted to do so when the computer starts.
-  If your computer fails to boot correctly after step 3, repeat the steps but select **SSD Support (Safe Mode)**. The same functionality is available, but your computer runs at a lower graphics resolution.

Secure Erase:


Start the Bootable SSD Utility, select the SSD to be Secure Erased from the options bar, then select "Maintenance" and select "Tools" in the task list. Then select Secure Erase and press the Erase button.

Since all data will be deleted from the SSD, the Bootable SSD Utility will display a warning message and ask you to confirm that you want to perform a Secure Erase. To continue, press OK. To abort, press Cancel. If the Secure Erase is successful, press the  button on the taskbar to shut down your computer.

After the computer has shutdown, remove the USB flash drive from the computer, power-on your computer and select boot from internal drive where Windows system installed and restart your Windows system.

After your computer is restarted, check that the data on the selected SSD has been erased.

If the data has not been erased, please contact our KIOXIA Customer support (<https://personal.kioxia.com/support>).

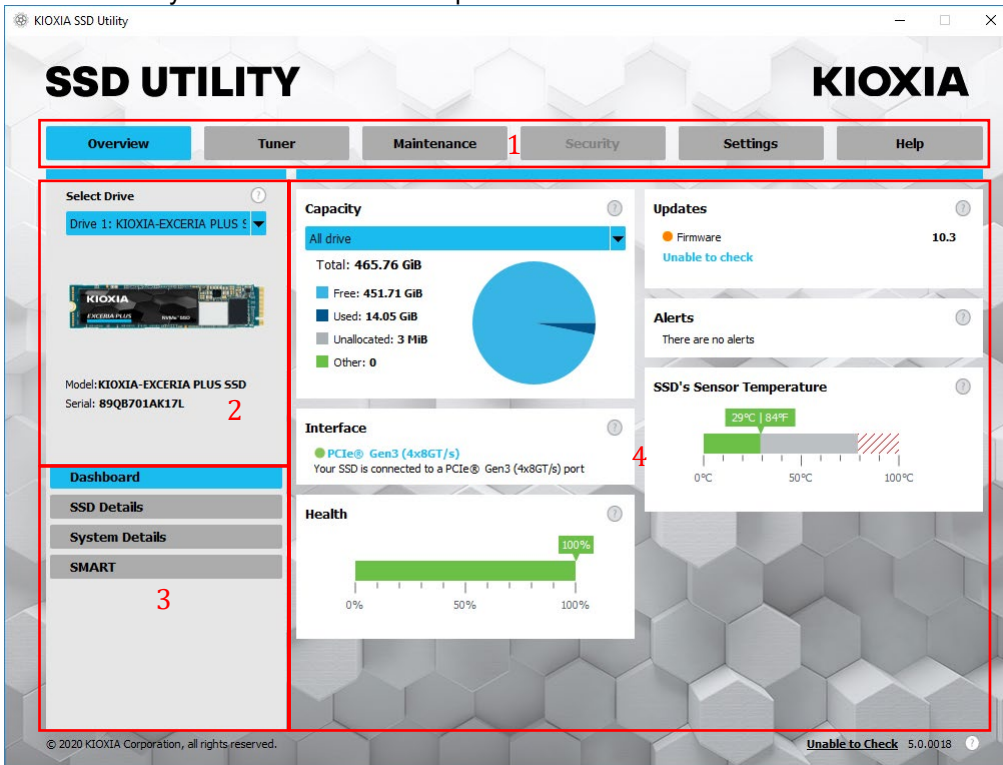
 **CAUTION:** Do not power off the computer until the operation is complete. And do not remove the USB flash drive running Bootable SSD Utility and SSD from the computer.

Remove Bootable SSD Utility from your USB flash drive

1. Insert the USB flash drive into a Windows computer.
2. Delete the USB flash drive volume and reformat it, which enables you to access the full drive capacity again.

UI overview






The SSD Utility window is divided into panes.



- 1 Options bar - main tasks you can carry out; what you click here changes what is shown in the main pane and further tasks are listed in the drive list pane
- 2 Select drive list - a list of SSDs attached to the current computer. If you only have one SSD attached to your computer, it is automatically selected. When you have more than one SSD attached, ensure that you select the SSD you want before you click an option in the options bar
- 3 Task list - tasks you can carry out; task status information
- 4 Main pane - displays information you request, or fields for a task

Bootable SSD Utility task bar

The bootable SSD Utility shows a task bar at the bottom of the screen, with the following icons:

-  **Shutdown** your computer
-  take a **Screenshot**. This is automatically saved to the screenshots folder on the USB flash drive
-  open a fully featured **Web Browser**
-  start **SSD Utility**; to use if you close SSD Utility and you want to run it again without restarting
-  (right side of task bar) view and edit wired and wireless network configuration

Uninstall SSD Utility


To uninstall from Windows, use the standard uninstall facility in Control Panel, or run the installer again and select **Remove**.

To remove SSD Utility from your bootable USB drive:

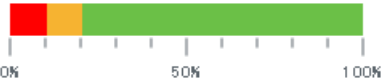
- 1 Insert the USB drive into a Windows computer.
- 2 Reformat the USB drive, which enables you to access the full drive capacity.

SSD Utility Features

SSD Utility supports the features in the following table, listed by their location in the user interface. Only the features supported by the selected drive are available. If you have more than one supported SSD, then options apply to the drive in the **Select Drive** list. To access the features that can apply to more than one drive, select **All Drives** from this list.

To view instructions for a task or information about what is shown in a pane, click . The Help is shown in a separate window that you can move, scroll through and close when finished. The Help includes links to further information online, including How To videos.

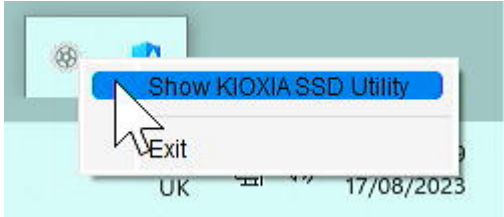
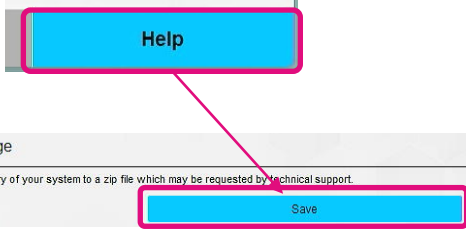
If you do not find the information you need in the Help or in this guide, you can contact our KIOXIA Customer support team; for details, see inside the front cover of this guide.

Option	Task	Feature
Overview	Dashboard	<p>A quick overview of the status the of the drive, including:</p> <p>Capacity - current usage of the drive</p> <p>Updates - available updates to firmware and device drivers</p> <p>Interface - status of the physical interface connection</p> <p>Alerts - any drive condition needing attention</p> <p>Health - remaining drive lifetime</p> <p>■ = SSD operating optimally (100% to 21%)</p> <p>■ = consider replacing your SSD to prevent future data loss (20% to 11%)</p> <p>■ = replace your SSD urgently (10% to 0%)</p> <p>When the value of the "Health Gauge" reaches zero (0), the SSD has reached its warranty limit. This may occur within the warranty period.</p>  <p>0% 50% 100%</p> <p>SSD's sensor temperature - temperature measured by the SSD's sensor (may be higher or lower than SSD case temperature)</p>
	SSD Details	Shows details on your SSD, which may be useful when contacting KIOXIA Customer support
	System Details	Shows details on your computer, which may be useful when contacting KIOXIA Customer support
	SMART	Shows current SMART attribute values, which can help you decide if there is a problem with your SSD
Tuner	SSD Tuner	Over Provisioning - reserve an area of your SSD to improve the performance and lifetime of your drive (Windows NTFS volumes only)
	Benchmark	Provides a quick benchmark to evaluate the performance of your SSD in your computer

Option	Task	Feature
Maintenance	Updates	Firmware Update - for a selected drive, provides advanced methods of updating SSD firmware, including from a local file. Firmware Updates - when All Drives is selected, you can apply any firmware updates that are available for all drives in your computer in a single operation
	Tools	Secure Erase - delete all the data from your SSD so that it is unrecoverable (non-NVMe SSDs) NVMe™ Format - low level format an NVMe SSD, including changing the LBA format and securely erasing the data
	Alerts	Shows a detailed report of all the alert conditions that may require attention, plus any that have occurred in the past. If All Drives is selected, the alerts for all drives are shown, including any drives that may no longer be active in your computer
	Bootable SSD Utility	Create a bootable USB flash drive from which you can run SSD Utility
Security	Password Protection	Set Password on a device Lock/unlock a portable SSD with a password. Change Password on a password protected device Remove Password from a password protected device
Settings	Settings	General application configuration, including: Language - the user interface language Monitoring - whether SSD Utility stays running to monitor your SSDs Notifications - suppress task tray notifications for alerts, updates and system events Logging - enable logging to help KIOXIA Customer support diagnose problems Run in the Background - enable tool to run in the Background Run at login - automatically runs tool when login
Help	Help	Contact Us - links to online support information Save Support Package - create and save a summary of your computer to a zip file, which may be requested by KIOXIA Customer support
Any	View Alerts	Appears at the bottom of each task list if there are active alerts; click it to take you to the detailed alerts report
	SSD Utility Update	Appears next to the version number at the bottom right of the UI if a new version of SSD Utility is available

Option	Task	Feature	EXCERIA PLUS G2 SSD	EXCERIA PLUS SSD	EXCERIA SSD	RD500 (TOSHIBA)	RC500 (TOSHIBA)	XS700 (TOSHIBA)	Note
Overview	Dash Board	Capacity	✓	✓	✓	✓	✓	✓	Only supported on Windows NTFS formatted drives for Bootable SSD Utility.
		Updates	✓	✓	✓	✓	✓	✓	
		Interface	✓	✓	✓	✓	✓	✓	
		Alerts	✓	✓	✓	✓	✓		
		Health	✓	✓	✓	✓	✓		
		SSD's sensor temperature	✓	✓	✓	✓	✓		
	SSD Details	SSD Details	✓	✓	✓	✓	✓	✓	
	System Details	System Details	✓	✓	✓	✓	✓	✓	
	SMART	SMART	✓	✓	✓	✓	✓		
Tuner	SSD Tuner	Over Provisioning	✓	✓	✓	✓	✓	✓	Only supported on Windows NTFS formatted drives.
	Benchmark	Benchmark	✓	✓	✓	✓	✓	✓	
Maintenance	Updates	Firmware Update	✓	✓	✓	✓	✓	✓	
	Tools	Secure Erase	✓	✓	✓	✓	✓	✓	
		NVMe Format	✓	✓	✓	✓	✓	✓	
	Alerts	Alerts	✓	✓	✓	✓	✓		
	Bootable SSD Utility	Bootable SSD Utility	✓	✓	✓	✓	✓		
Security	Password Protection	Password Protection						✓	
Settings	Settings	Language	✓	✓	✓	✓	✓	✓	
		Monitoring	✓	✓	✓	✓	✓	✓	
		Notifications	✓	✓	✓	✓	✓	✓	
		Logging	✓	✓	✓	✓	✓	✓	
		Run in the Background	✓	✓	✓	✓	✓	✓	
		Run at login	✓	✓	✓	✓	✓	✓	
Help	Help	Contact US	✓	✓	✓	✓	✓	✓	
		Save Support Package	✓	✓	✓	✓	✓	✓	
All	View Alerts	View Alerts	✓	✓	✓	✓	✓	✓	
	SSD Utility Update	SSD Utility Update	✓	✓	✓	✓	✓	✓	

List of Error Messages

SSD Utility Error Message	When the error messages is displayed	Description of error message and how to address
Unable to run SSD Utility as there is already a copy running on this system	At the startup of SSD Utility execution	<p>The SSD Utility is already running. Multiple SSD Utilities cannot be run at the same time.</p> <p>Close the pop-up window with this message, and then from the menu of the SSD Utility icon in the notification area of the taskbar.</p> <p>Select "Show KIOXIA SSD Utility" to display the SSD Utility that has already been run.</p> 
Secure erase failed	During "Secure Erase"	<p>The "Secure Erase" has not been completed correctly. If you still cannot Secure Erase after trying again, try connecting to another port.</p> <p>If you still cannot Secure Erase after taking the above measures, please contact our KIOXIA Customer support.</p>
Firmware update failed	During firmware update	<p>The firmware update has not been completed correctly. If you still cannot update firmware after trying again, try connecting to another port.</p> <p>If you still cannot update the firmware after taking the above measures, please contact KIOXIA Customer support.</p>
Unexpected error, please send a support package	All display screens within the SSD Utility	<p>Please send your support package to KIOXIA Customer Support.</p> <p>You can save the support package (zip file) by following these steps.</p> <p>Click on the "Save" button under "Save Support Package" in the "Help" option.</p> 
Please reinstall SSD Utility immediately.	At the startup of SSD Utility execution	<p>It is likely that an important file required to execute the SSD Utility is corrupted/missing.</p> <p>Please uninstall the SSD Utility and then reinstall it.</p>
Maximum retries exceeded, power cycle drive by removing from USB port and reinserting, to try again.	During "Unlock Device"	<p>The device could not be unlocked because you entered the wrong password consecutively. Please safely remove the affected drive from the USB port, re-insert it, and retry "Unlock Device" again.</p>
Password settings of your Portable SSD are in an unknown state. Power cycle drive by removing from USB port and reinserting.	During "Set Password" for portable SSD	<p>Safely remove the drive from the USB port and reinsert it, then retry "Set Password".</p>

Password Incorrect	During "Unlock Device"	The password you entered is incorrect. Please close the pop-up and enter the correct password.
Failed to configure Password Protection. Please contact technical support.	After "Set Password"	There is some possibility that "Set Password" has failed. Please try "Remove Password". If you cannot "Remove Password", please contact KIOXIA Customer Support.

Bootable Media Error Message	When the error messages is displayed	Description of error message and how to address
Serial number xxxxxxxxxxxx not found	When booting from a USB flash drive with Bootable Media already created	The SSD selected when Bootable Media was created could not be found. Please make sure the SSD you selected when creating Bootable Media is connected to your computer. If there are unsupported SSDs connected to the computer, please remove them and try again.
Segmentation fault	When booting from a USB flash drive with Bootable Media already created	There is some possibility that the Bootable Media program is not running properly. If unsupported SSDs are connected to your computer, please remove them and try again.

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