

SSD Utility

Installation Guide

Software Version 2.n

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Installation Technical Support

Toshiba Memory Corporation products include free technical support for direct, expert advice. For installation technical support, you can contact us at <https://support.ocz.com/>.

Document identifier: INSTL-GUIDE-SSD-UTLTY, Revision 3, September 2017
Software version: 2.n

Welcome!

SSD Utility enables you to manage and get the best out of your SSDs.

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, BIOS and device drivers
- manage over provisioning
- optimize your operating system
- secure erase data to make it unrecoverable
- assist technical support diagnose 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 6.

System requirements

Supported SSDs include:

- RevoDrive family, RD400
- Vector family, VT180
- Vertex 4n0 family
- Arc family
- Trion family, TR150
- Intrepid 3000 family
- Z-Drive 4500
- Z-Drive 6000 family, ZD6000 family
- Saber 1000
- Deneva 2
- TL100
- TR200
- VX500

Supported operating systems:

- Windows® 10
- Windows® 8.1
- Windows® 7
- Windows Server® 2012 R2
- Windows Server® 2012
- Windows Server® 2008 R2
- Linux® distributions:
 - Fedora® 19 and above
 - Mint 17 and above
 - Ubuntu® 14.04 and above
- Red Hat® Enterprise Linux/CentOS/Oracle 6.0 and later
- SUSE® Linux Enterprise Server 11.2 and later
- Ubuntu 10.04LTS, 12.04LTS and later



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:

- Windows® and Linux: set the SATA controller to AHCI mode in the motherboard BIOS; for instructions see the user documentation for your computer
- Windows®: for full SSD Utility functionality when using NVMe® SSDs, install the Toshiba NVMe device driver
- you must run SSD Utility as an administrator
- for firmware or BIOS updates, your computer must be connected to the internet

Installing SSD Utility

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

- Install SSD Utility in Windows® or Linux
- Create a bootable USB flash drive. 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

Install SSD Utility in Windows® or Linux

Windows® - run the installer and follow the onscreen instructions.

Linux - extract the executable from the tar.gz file using **tar xvf SSDUtility_version.tar.gz** and copy the executable to the location on your computer from which you want to run it.

Create a bootable USB flash drive

You can use a USB flash drive to create a standalone bootable version of SSD Utility, which can be used on your Windows®, Linux or Mac® system and start SSD Utility. These instructions assume that you are familiar with the applications described and have access to the relevant user documentation for the full instructions.



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

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

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

Bootable SSD Utility

To create a bootable version of SSD Utility on a USB flash drive in **Windows® and Linux**, run the standard SSD Utility software.

- 1 (For details of the UI layout, see UI overview on page 4.) In the options bar, select **Maintenance**; then in the task list, select **Bootable SSD Utility**.
- 2 Click **Create**.

To prepare a bootable version of SSD Utility on a USB flash drive in **Mac OS X® 10.11 (El Capitan)** or later, see the instructions at <https://support.ocz.com/customer/portal/articles/2241497-how-do-i-create-a-bootable-ssd-guru-usb-drive-in-mac-os-x-10-11-el-capitan-and-later->.

Start SSD Utility

Windows® operating system

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

Linux operating system

Navigate to the folder you copied SSD Utility to and double click the executable.

- i** If the **Support** and **Forums** buttons under **Help** do not open correctly in your browser on your Linux distribution, then use the following command line to run SSD Utility instead:

```
su - -c "$PWD/SSDUtility"
```

Windows® or Linux bootable media

- 1 Insert your USB flash drive into your system, then restart your system.
- 2 Set your BIOS to boot from your USB flash drive; see the relevant user documentation for your system. 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 system has booted, SSD Utility automatically starts; see UI overview on page 4.
- 5 To update your SSD firmware or BIOS 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 system starts.

- i** 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 system runs at a lower graphics resolution.

Apple® Macintosh bootable media

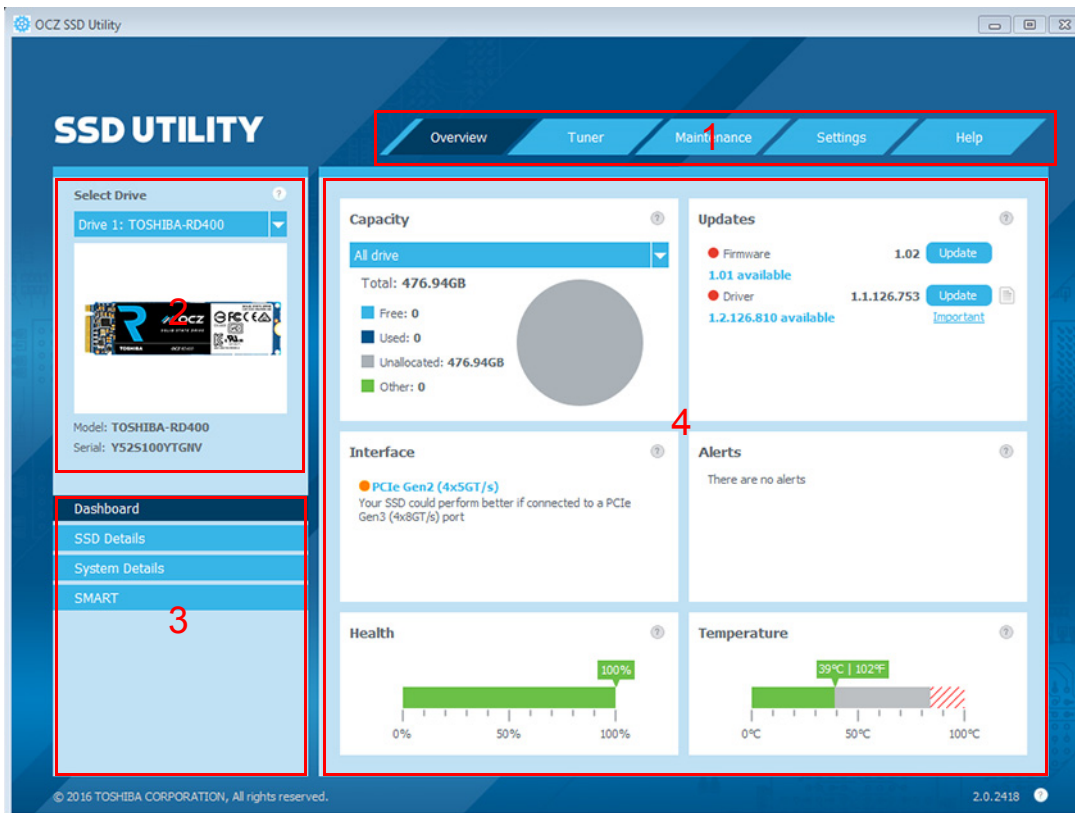
- 1 Shut down your system.
- 2 Insert the bootable USB flash drive and start up your Mac.
- 3 When the screen switches on (indicated by the black screen becoming gray), hold down the **Option (Alt)** key until the bootable drives are listed. A USB icon (example below) is shown. This can take from several seconds up to several minutes: you must continue to press the **Option (Alt)** key.



- 4 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.
 - 5 SSD Utility starts; see UI overview on page 4.
 - 6 To update your SSD firmware or BIOS from the internet when your Mac 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 system starts.
- i** If your Mac fails to boot correctly after step 4, repeat the steps but select **SSD Support (Safe Mode)**. The same functionality is available, but your system runs at a lower graphics resolution.

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:

- **shut down** your system
- 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 uninstall from Linux, delete the application executable file from your computer.

To remove SSD Utility from your bootable USB drive:

- 1 Insert the USB drive into a Windows® or Linux 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 technical support team; for details, see inside the front cover of this guide.

Option	Task	Feature
Overview	Dashboard	A quick overview of the status the of the drive, including: Capacity - current usage of the drive Updates - available updates to firmware, BIOS and device drivers Interface - status of the physical interface connection Alerts - any drive condition needing attention Health - remaining drive lifetime SSD's sensor temperature - temperature measured by the SSD's sensor (may be higher or lower than SSD case temperature)
	SSD Details	Shows details on your SSD, which may be useful when contacting technical support
	System Details	Shows details on your computer, which may be useful when contacting technical 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)
	OS Tuner	Operating System Tuner - optimize the operating system on your SSD if you are using it as your Windows® system boot drive
	Benchmark	Provides a quick benchmark to evaluate the performance of your SSD in your system
Maintenance	Updates	Firmware Update, BIOS Update - for a selected drive, provides advanced methods of updating SSD firmware and BIOS, including from a local file. Firmware & BIOS Updates - when All Drives is selected, you can apply any firmware or BIOS updates that are available for all drives in your system 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 DAS Polarity - change the polarity of the Drive Activity Signal Power Loss Test - test the power loss protection hardware on your drive Set SATA Speed - limit the maximum SATA speed at which your SSD can operate Set NVMe Power State - set the current power state for an NVMe drive that supports manual power state control
	Namespaces	For NVMe SSDs that support multiple namespaces, you can create, attach, detach and delete namespaces

Option	Task	Feature
Maintenance cont.	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
Settings	Settings	General application configuration, including: Language - the user interface language Monitoring - whether SSD Utility stays running to monitor your SSDs Proxy Server - specify a proxy server if you use one to access the internet Notifications - suppress task tray notifications for alerts, updates and system events Logging - enable logging to help technical support diagnose problems
Help	Help	Contact Us - links to online support information Save Support Package - create and save a summary of your system to a zip file, which may be requested by technical 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

Developer Options

Developer options are enabled by hidden keystrokes. These are not prohibited, but the performance of such developer options are not warranted or guaranteed by TOSHIBA.

Option	Task	Feature
Developer Options	Verbose Logging	Selected from within the " Settings " pane: Keystroke Ctl-Shift-V <ul style="list-style-type: none"> This will create an additional selection box for verbose logging. This increases the amount of log information that is recorded but may impact system performance.
	Creation of user-specified bootable SSD Utility from a file stored on your PC	Selected from within the " Maintenance " pane: Keystroke Ctl-Shift-B <ul style="list-style-type: none"> This will create a file browser panel that can be used to select the bootable version of SSD Utility to copy on to your USB drive. Caution: please backup all data on the USB prior to creating bootable SSD Utility. This process will result in data being lost.