Western Digital.

Western Digital® SSD Dashboard

User Manual

Accessing Online Support

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- **Downloads —** Download software and updates for your Western Digital product
- **Registration —** Register your Western Digital product to get the latest updates and special offers at http://register.wdc.com
- **Warranty & RMA Services —** Get warranty, product replacement (RMA), RMA status, and data recovery information
- **Knowledge Base —** Search by keyword, phrase, or Answer ID
- **Installation —** Get online installation help for your Western Digital product or software
- **Western Digital Community —** Share your thoughts and connect with other Western Digital users at http://community.wdc.com

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1 Introduction

This chapter contains the following sections.

- Minimum System Requirements
- Supported Operating Systems
- Supported Languages
- Installation
- Usage

Minimum System Requirements

The Western Digital SSD Dashboard is a Microsoft Windows application. Administrative rights are required for installation and execution of the application.

Supported Operating Systems

- Windows 10 (32/64 bit)
- Windows 8.1 (32/64 bit)
- Windows 7 (32/64 bit)
  - Windows 7 requires a Microsoft Hotfix to support NVMe, see: MS Hotfix 2990941
  - Windows 7 requires the support of a graphics driver that supports OpenGL 2.1 or higher.

Supported Languages

Seventeen languages are supported:

- Czech
- Danish
- Dutch
- English
- French
- German
- Italian
- Japanese
- Korean
- Polish
- Portuguese
- Russian
- Simplified Chinese
- Spanish
- Swedish
- Traditional Chinese
- Turkish

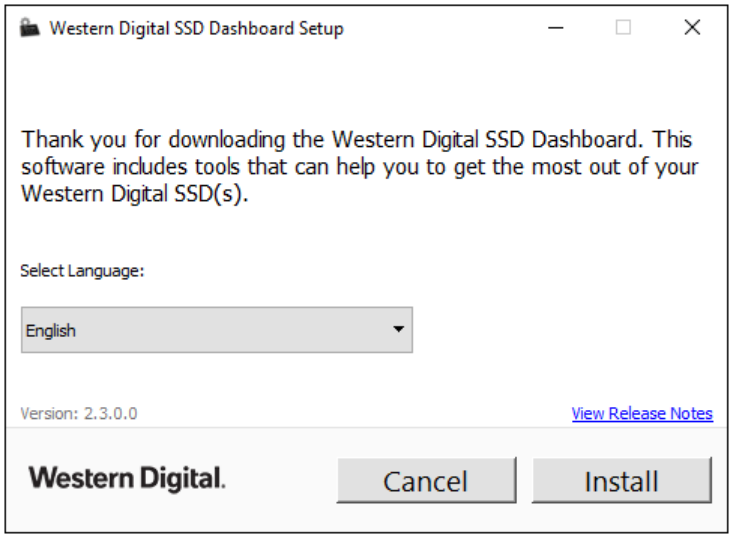
Installation

You can download the current version of the Western Digital SSD Dashboard software from http://support.wdc.com.

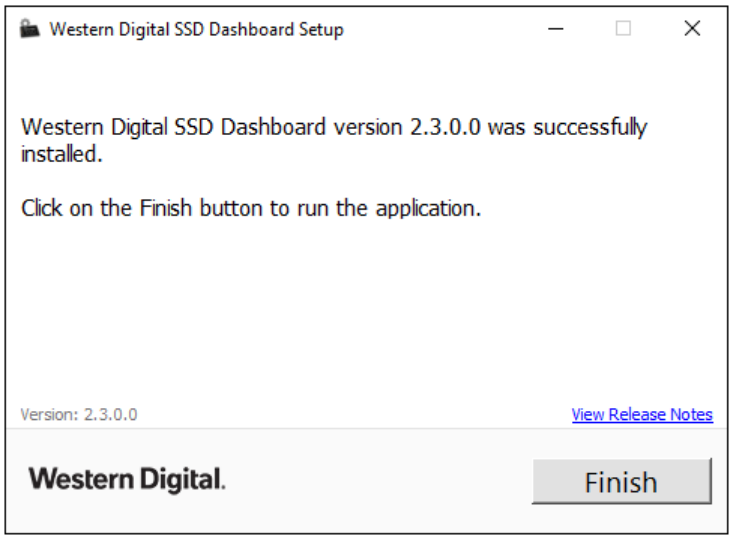
After the file has been downloaded, follow these steps to install the application.

1. Double-click on the **WesternDigitalSSDDashboardSetup.exe** file icon to launch the installation.

   Note: To cancel the installation, click on the **X** in the upper-right corner of the dialog box.



2. When the installation is complete, click **Finish**. The Western Digital SSD Dashboard launches and populates the Status section.

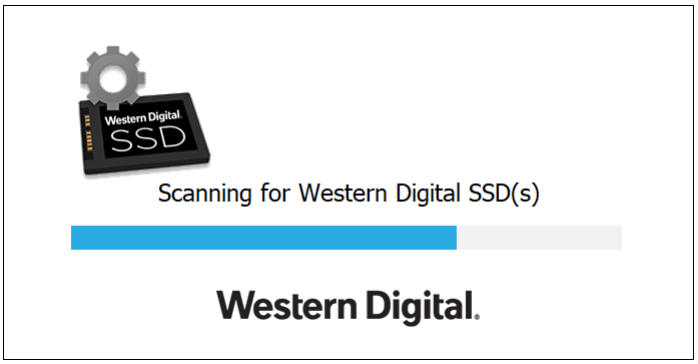


   When the installation has completed successfully, click on the **Finish** button. This will automatically launch the Western Digital SSD Dashboard and load the Status section.

   Note: To perform an application update, see Application Update.

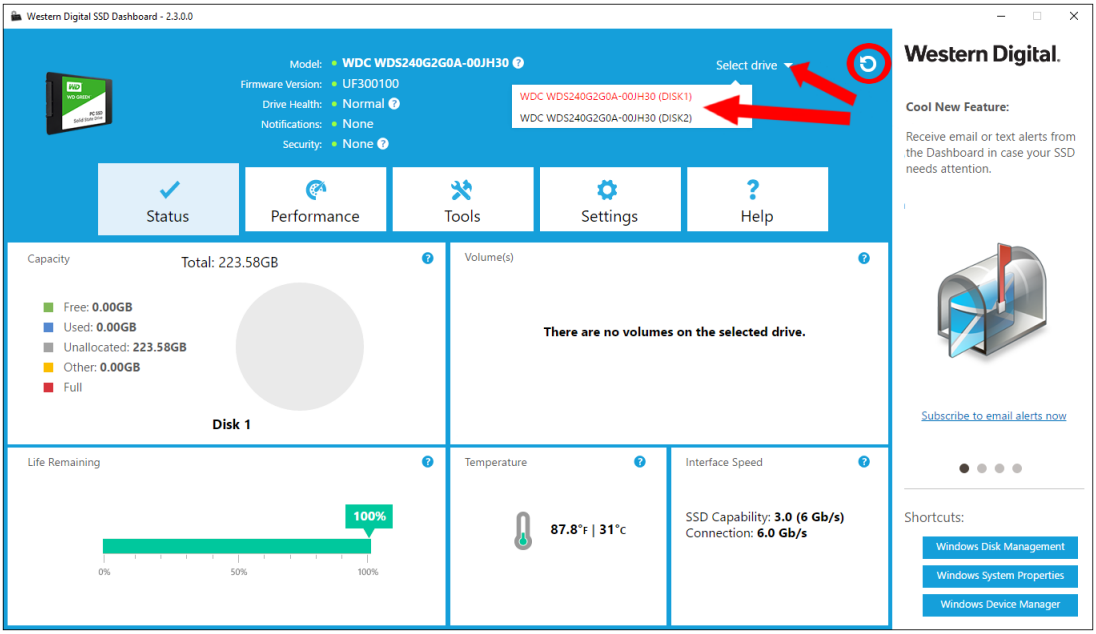
Usage

The Western Digital SSD Dashboard automatically scans for Western Digital SSDs after it launches.



If a Western Digital SSD is connected to the system after Dashboard is launched, the Dashboard will automatically scan the system. It will add the drive as the current model if this is the only Western Digital drive in the system, or add it to the list of drives in the Select Drive drop-down. If, for some reason, you do not see the drive, click the **Refresh** icon in the upper right corner of the screen to rescan the system for Western Digital SSDs.

When all SSD drives have been detected, you can select a specific drive by clicking on the **Select drive** drop-down menu.



2 Status

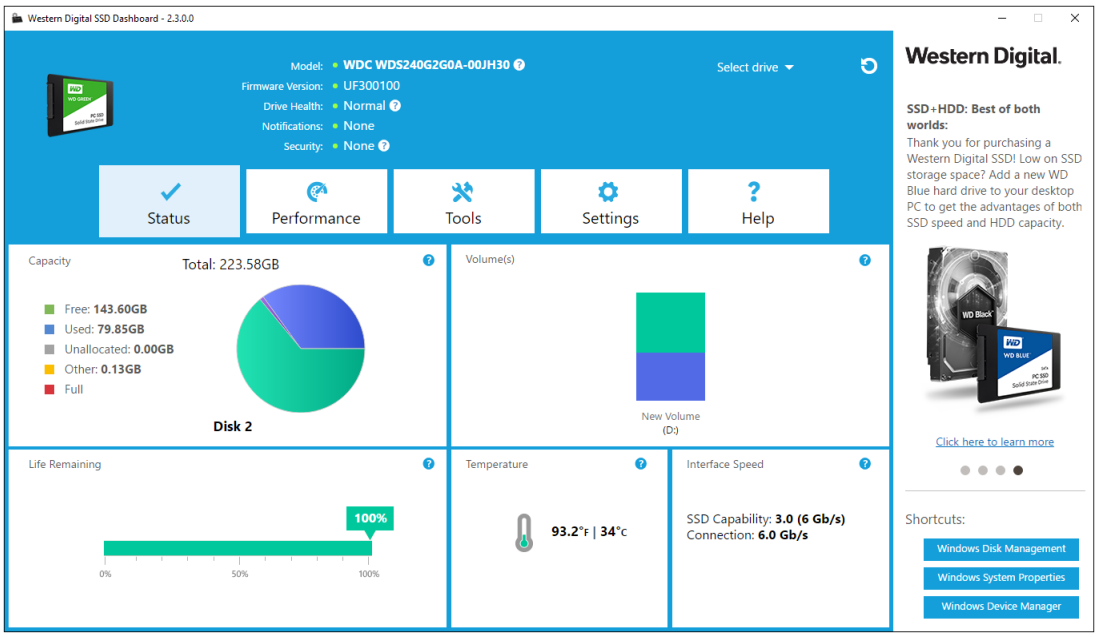
This chapter contains the following sections.

- Status Section
- Capacity
- Volumes
- Life Remaining
- Temperature
- Interface Speed

Status Section

The Status section displays the overall state and health of the selected drive.

Note: To select an SSD drive, click the **Select drive** drop-down menu.



The following information is listed at the top of the Status screen:

- **Model** - The product model name of the selected Western Digital SSD.
- **Firmware Version** - The version number of the firmware installed on the selected Western Digital SSD.
- **Drive Health** - Drive Health summarizes the current condition of the selected SSD based on Self-Monitoring, Analysis and Reporting Technology (S.M.A.R.T.) attributes.
  - Normal: The drive is in good condition.
  - Poor: The number of spare blocks has reached the minimum threshold or the drive is overheating. In the case of low spare-block count, replace this drive with a new Western Digital SSD.
- **Notifications** - Notifications, such as software or firmware updates available or S.M.A.R.T. attribute warnings, will be displayed in this area.
- **Security** - If the selected drive supports security, this area will be visible.
  - "Not Activated" displays if the security protocol is not active.

- If the security protocol is active, the name of the active security protocol displays, for example, "TCG Opal 2.0."

Capacity

As used for storage capacity on our packaging and device label, one gigabyte (GB) = one billion bytes and one terabyte (TB) = one trillion bytes. On the Western Digital SSD Dashboard and within Windows folders, total accessible capacity varies depending on operating environment and the capacity displayed is based on the Windows operating system's calculation method for total-reported capacity.

- Green - Free space
- Blue - Used space
- Gray - Unallocated space
- Yellow - Other
- Red - Full

Volumes

The chart displays any drive volumes recognized by Windows.

- Green - Free space
- Blue - Used space
- Red - No free space

Life Remaining

The Life Remaining percentage represents the remaining writes the selected drive can perform in its lifetime.

Note: If this feature is not supported by the drive, a "Not Supported" message will be displayed.

Temperature

The temperature reported by the SSD. The thermometer graphic displays one of two colors, as follows.

- Green - Normal operation
- Yellow - The SSD is currently overheating

Interface Speed

- SSD Capability - The fastest speed supported by the drive.
- Connection - The port connecting the SSD to the system.

Note: For SATA SSD, the connection speed is the actual speed negotiated with the system. If the connection speed is lower than the SSD Capability

speed, the following message appears in red: For best performance, connect your SSD to a 6.0 Gb/s-capable port.

3 Performance

This chapter contains the following sections.

- Performance Chart
- Transfer Speed MB/s
- Transfer IOPS
- TRIM

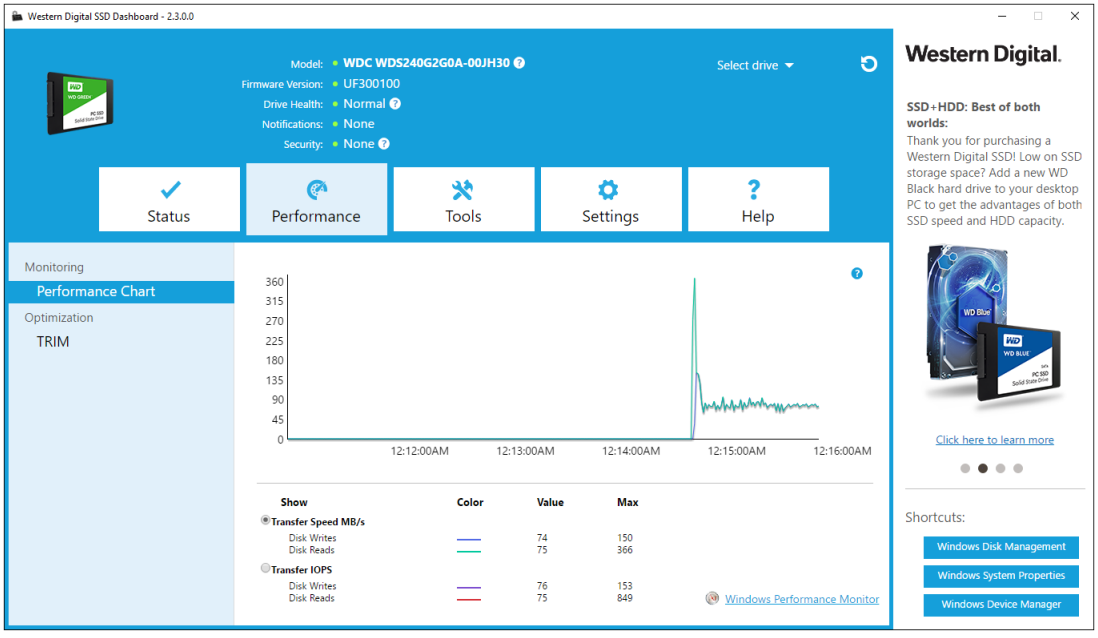
Performance Chart

The Performance chart provides two different real time performance metrics: transfer speed MB/s (megabytes per second) and transfer IOPS (I/O operation count per second).

The chart scrolls from right to left and shows moving, 5-minute time line increments on the horizontal axis. The vertical axis of the chart will show either Transfer Speed MB/s or Transfer IOPS.

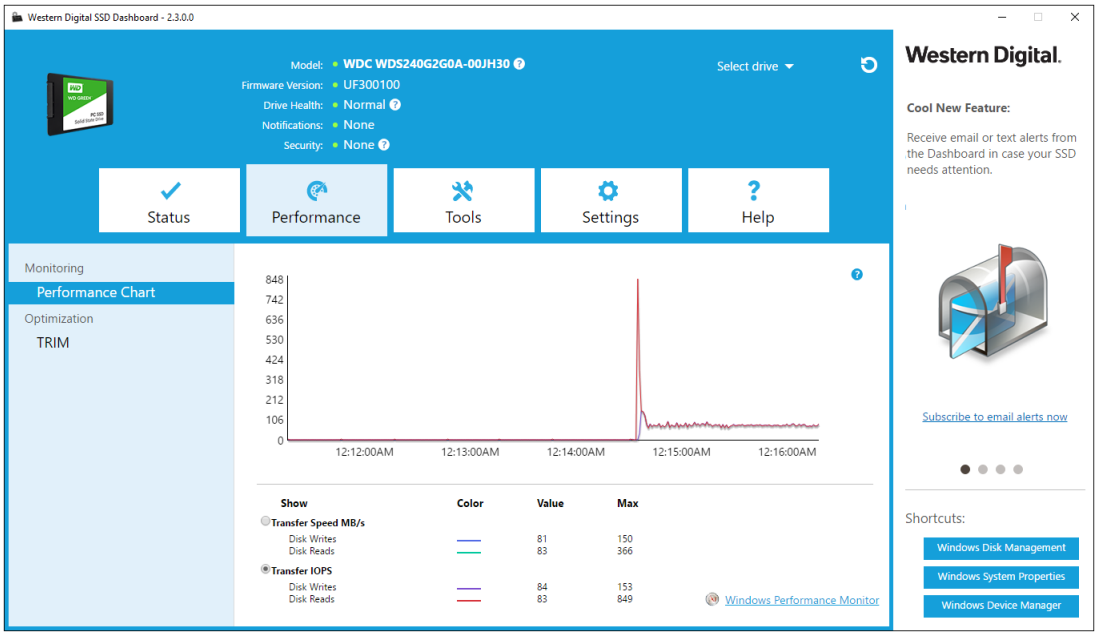
Transfer Speed MB/s

The SSD MB/s write and read speeds are shown in the chart with blue and green indicators, respectively.



Transfer IOPS

The SSD I/O write and read speeds are shown in the chart with purple and red indicators, respectively.

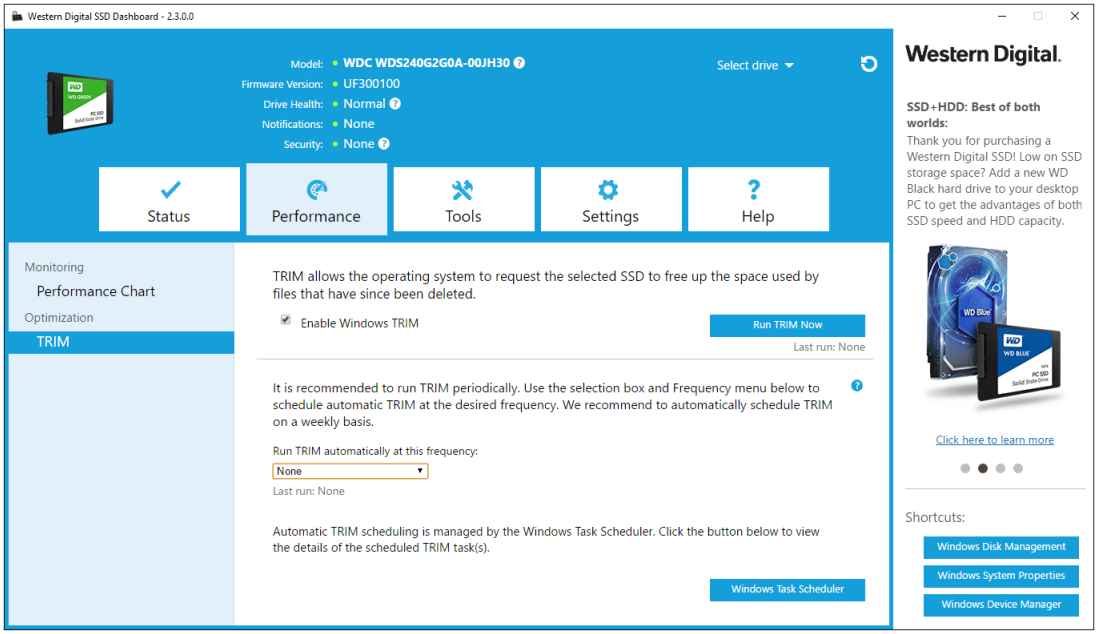


TRIM

(This feature will be displayed if the operating system supports it.) The TRIM function frees up space on the SSD that was used by files that have been deleted.

Note: Western Digital recommends that TRIM be run on a weekly basis.

- Click the **Enable Windows TRIM** checkbox to automatically run TRIM.
- Select **Weekly**, for the frequency, if available.
- Click **Run TRIM Now** to manually run TRIM.



4 Tools

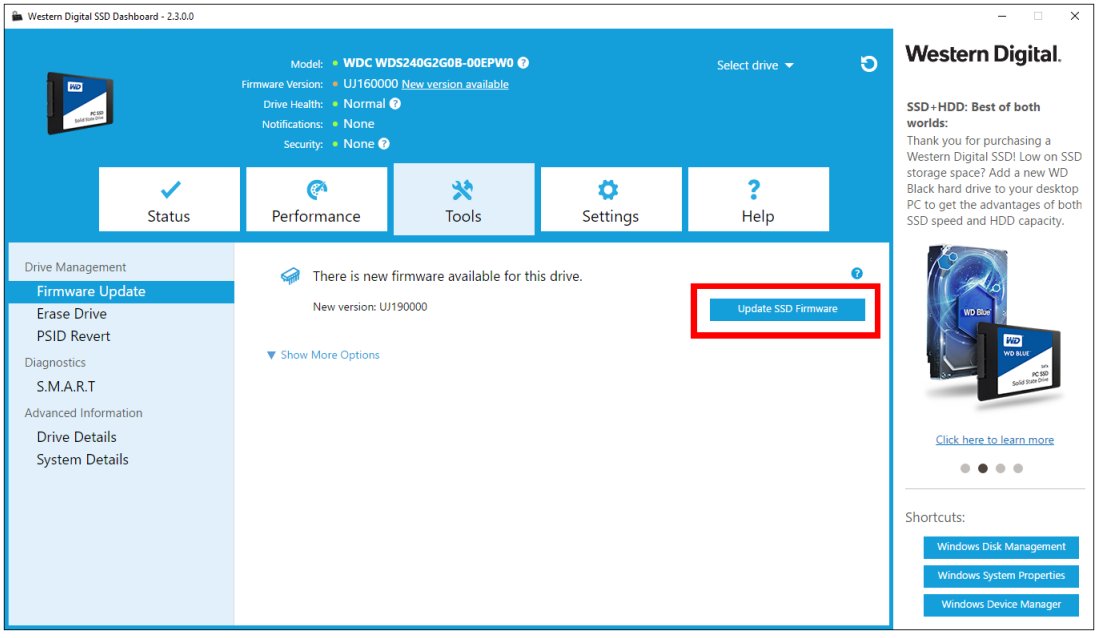
This chapter contains the following sections.

- Firmware Update
- Check for Updates
- Update Using Bootable USB Drive
- Update Using File on My Computer
- Erase Drive—Secure Erase
- Delete User Data with Secure Erase
- Create a Bootable USB Drive for Secure Erase
- Sanitize
- Delete User Data with Sanitize
- Create a Bootable USB Drive with Sanitize
- Erase Drive
- Bootable USB Drive for Erase Drive
- S.M.A.R.T.
- Diagnostic Short Test
- Diagnostic Extended Test
- Drive Details
- System Details

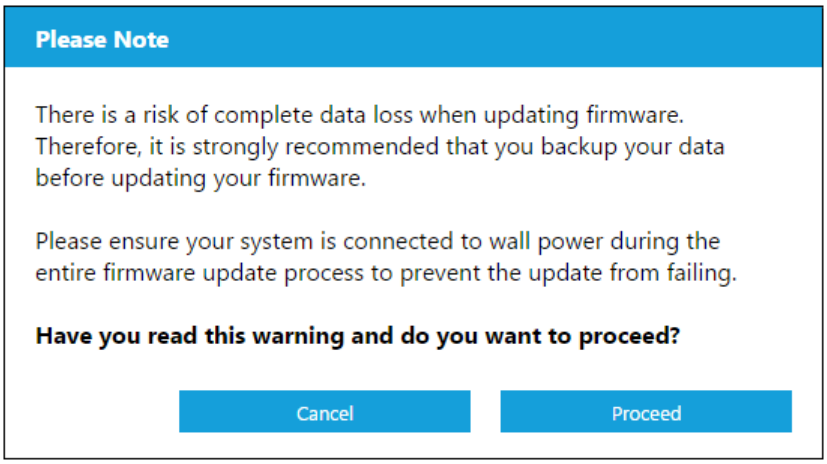
Firmware Update

Note: To avoid data loss, it is strongly recommended that you backup your data before updating the firmware.

Click **Update SSD Firmware** to initiate a firmware update, or click on the **Show More Options** drop-down menu to choose from additional firmware update methods.

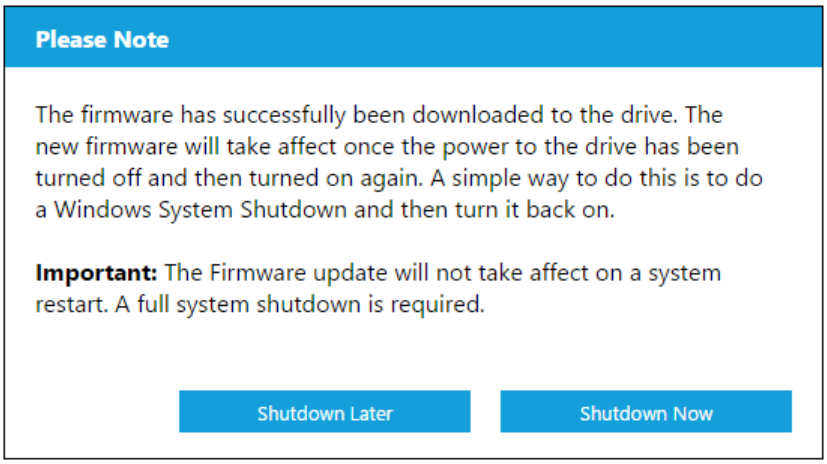


When you click the **Update SSD Firmware** button, a confirmation dialog box appears.



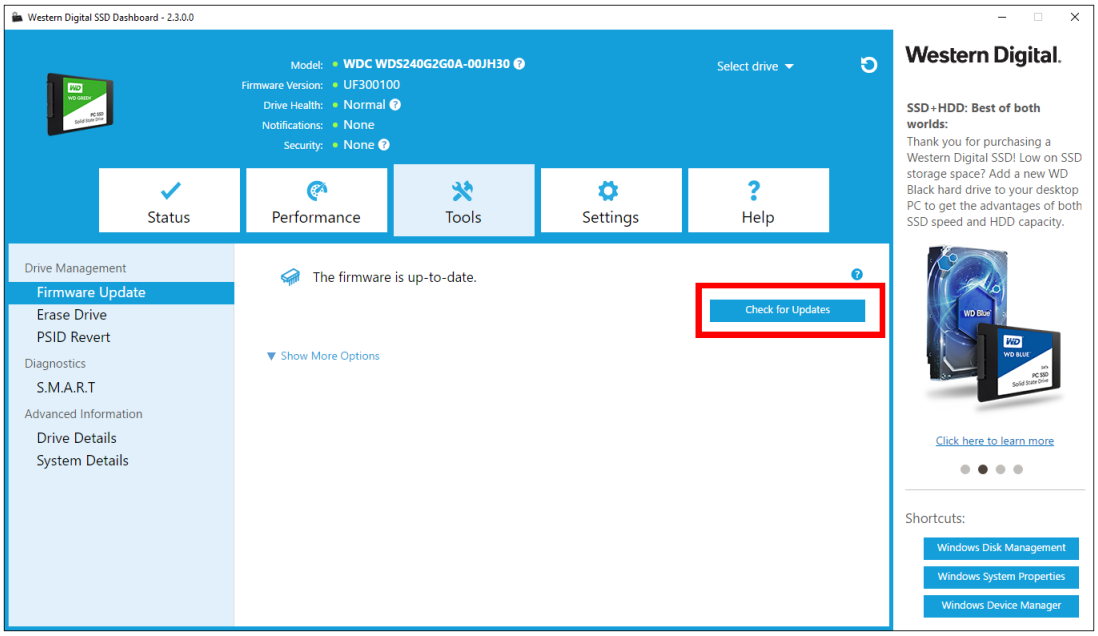
After the firmware has been downloaded to the SSD, a full-system shutdown is required to complete the firmware update process for SATA SSDs. This is typically done by shutting the computer down, and then turning it back on.

A dialog box appears that provides the option to shut the computer down now, or later.

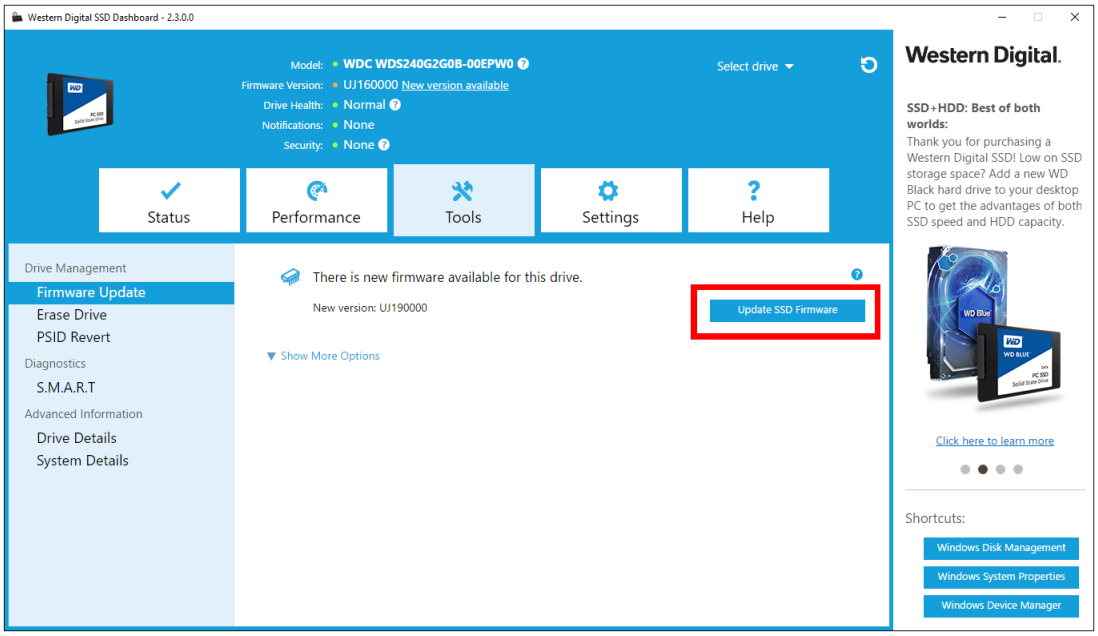


Check for Updates

Click **Check for Updates** to manually check if a firmware update is available for the selected drive.

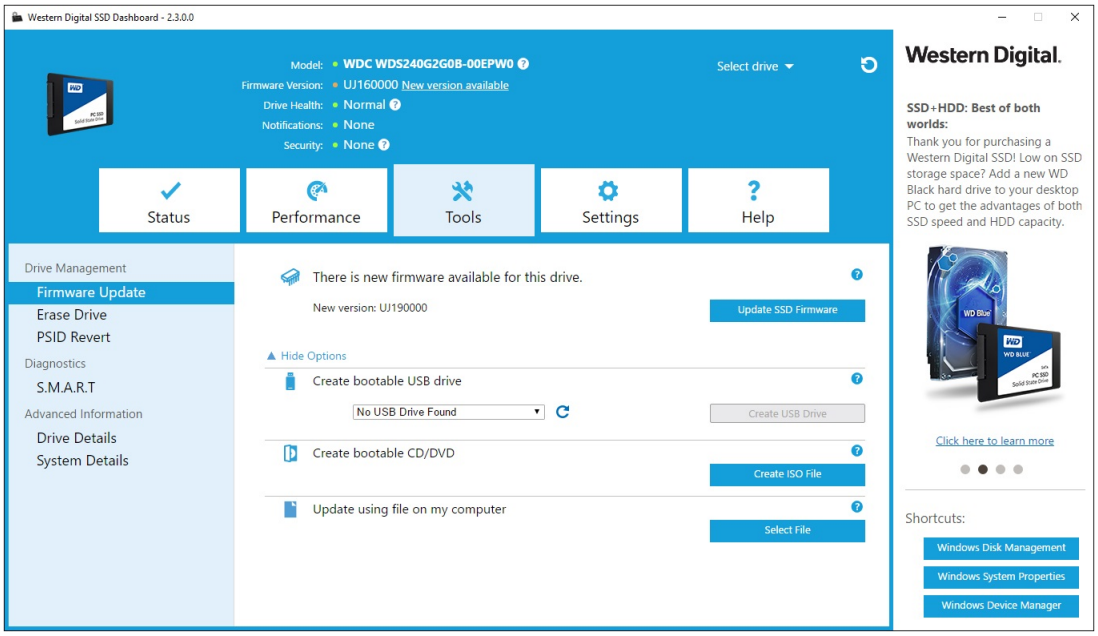


If a firmware update is found, the status message will change to "There is new firmware available for this drive," and the update options will be displayed.



Update Using Bootable USB Drive

Note: The USB must be formatted in order for the Dashboard to recognize it. During USB creation, it will automatically be re-formatted to FAT32. All data will be permanently erased from the USB device.



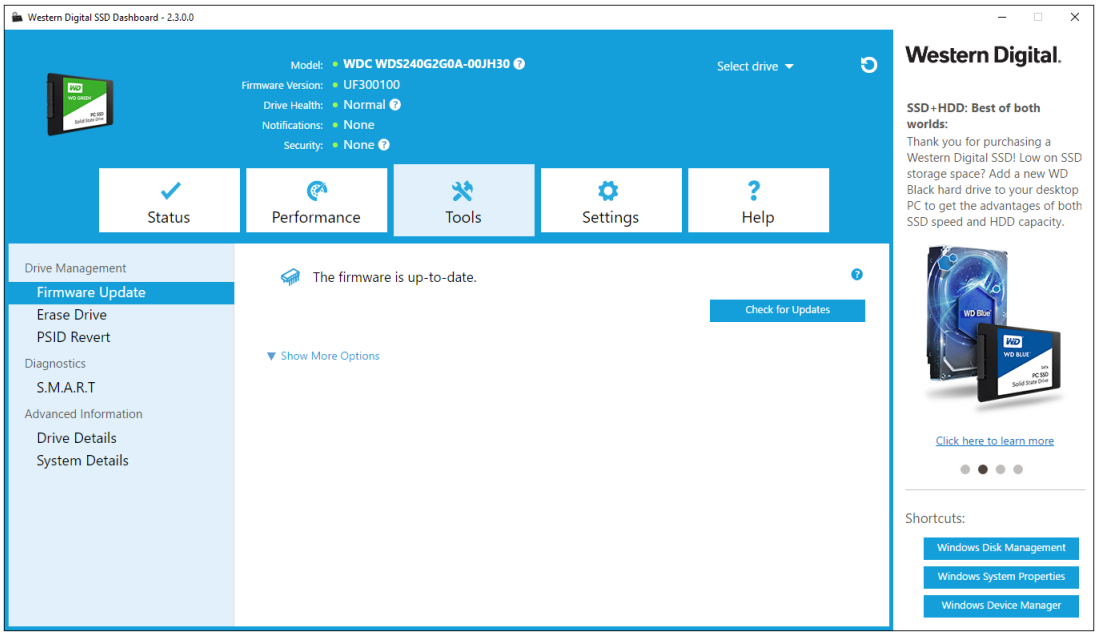
1. Insert a formatted USB drive. If the USB drive is not automatically detected, click the **refresh** icon next to the "No USB Drive Found" drop-down.
2. Before proceeding, backup any existing data on the USB drive.
3. Click the drop-down list to select the USB drive.

   Note: If the USB drive is not listed, click the Refresh icon next to the drop-down list to scan for the USB drive.
4. Click **Create USB Drive**.

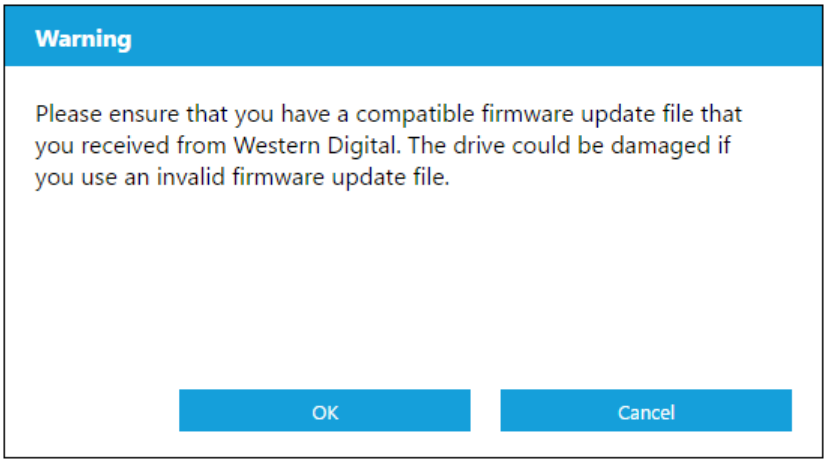
Update Using File on My Computer

Note: Only use compatible firmware update files for this process.

If you have already downloaded the specific firmware file that should be used for the update, click **Select File**.



A confirmation dialog box appears.



Erase Drive—Secure Erase

Secure Erase permanently destroys all user data on the selected SSD.

Note: Secure Erase deletes the mapping table on the selected SSD, but it does not erase all blocks that have been written to. This makes Secure Erase a faster "erase" option than the Sanitize function (also see Sanitize).

Secure Erase can only be performed on an SSD that is not the boot drive. However, if the SSD is the boot drive, the Secure Erase function can be performed from a formatted USB. See Create a Bootable USB Drive for Secure Erase.

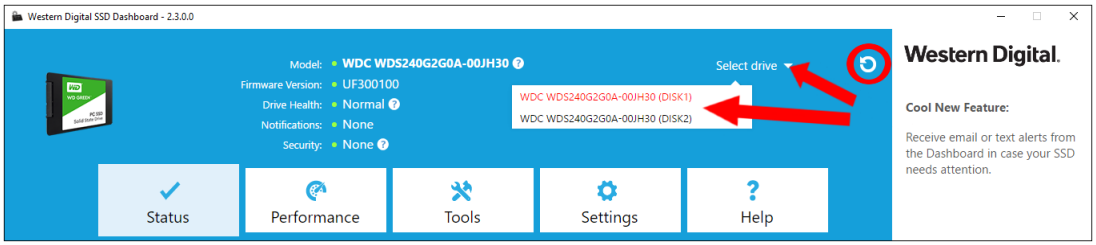
Delete User Data with Secure Erase

Note: Ensure that the correct SSD is selected on a system with more than one SSD. The Secure Erase function permanently destroys all user data on the selected SSD.

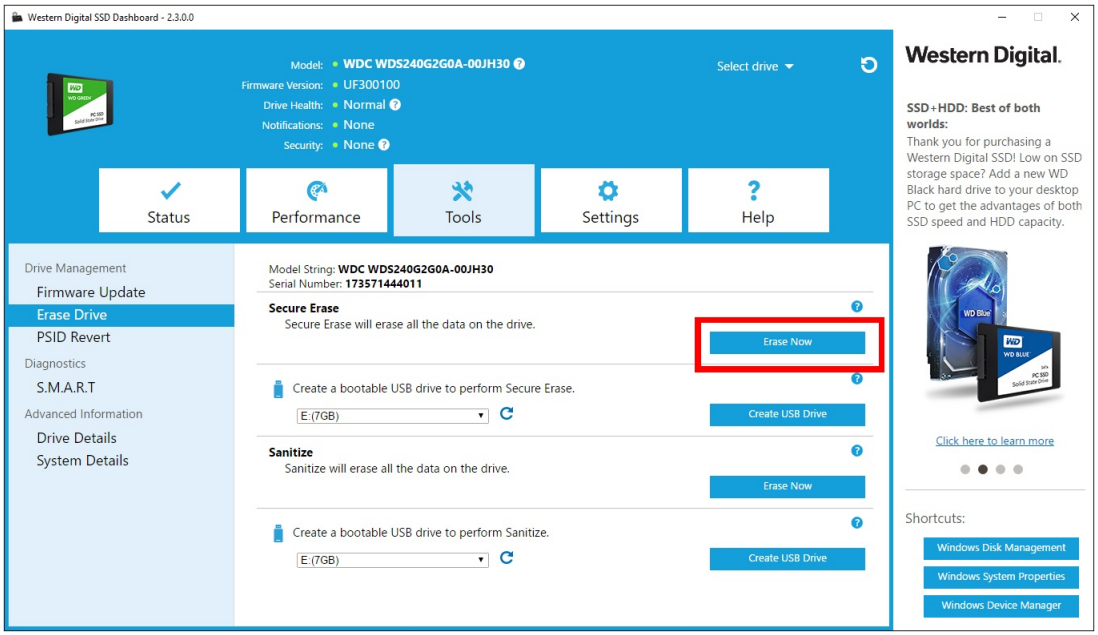
1. In the blue section at the top of the Dashboard, click the **Select drive** drop-down menu to select the SSD on which all user data will be permanently deleted.

   Note: If the SSD to be deleted is not listed, click the **Refresh** icon next to the Select drive drop-down menu to scan for the SSD.

   The name of the selected SSD appears next to **Model**.



2. Click **Erase Now** next to **Secure Erase** to delete all user data and leave the drive in an unformatted state.

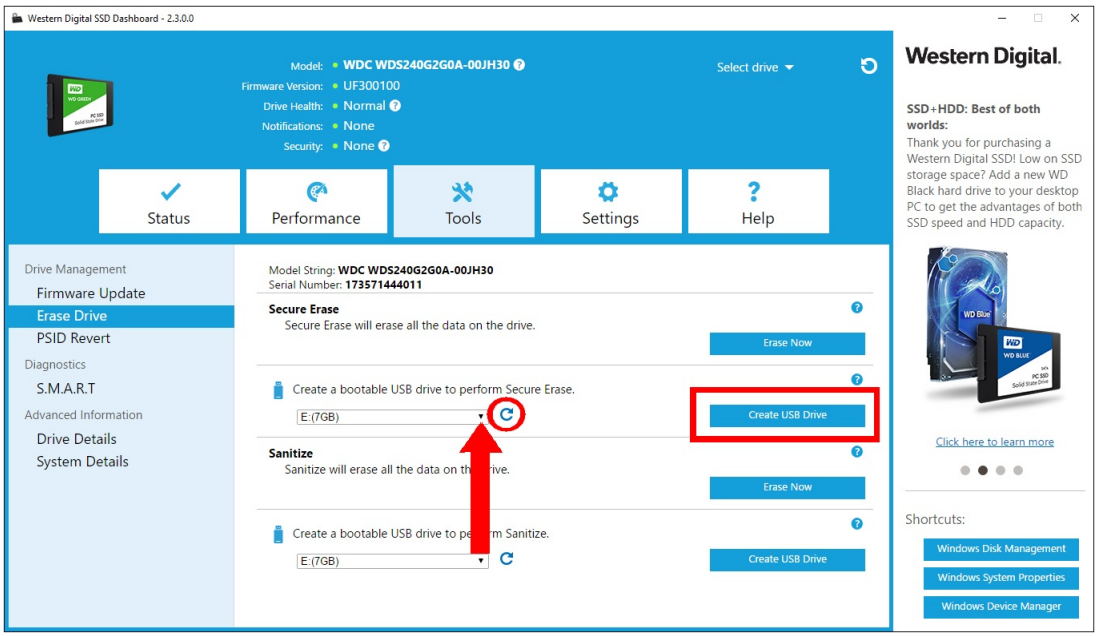


Create a Bootable USB Drive for Secure Erase

Note: The USB drive must be formatted as a FAT or FAT32 file system.

1. Insert a formatted USB drive.
2. Before proceeding, backup any existing data on the USB drive.
3. Click the **drop-down** list to select the USB drive.

Note: If the USB drive is not listed, click the **Refresh** icon next to the drop-down list to scan for the USB drive.



4. Click **Create USB Drive**.

Sanitize

Sanitize permanently destroys all user data on the SSD.

Note: Sanitize deletes the mapping table and erases all blocks that have been written to on the selected SSD. This makes Sanitize a slower "erase" option than the Secure Erase function (also see Secure Erase).

Sanitize can only be performed on an SSD that is not the boot drive. However, if the SSD is the boot drive, the Sanitize function can be performed from a formatted USB. See Create a Bootable USB Drive for Secure Erase.

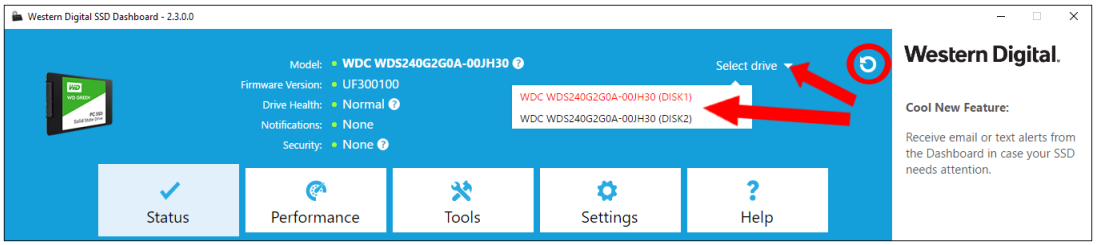
Delete User Data with Sanitize

Note: Ensure that the correct SSD is selected on a system with more than one SSD. The Sanitize function permanently destroys all user data on the selected SSD.

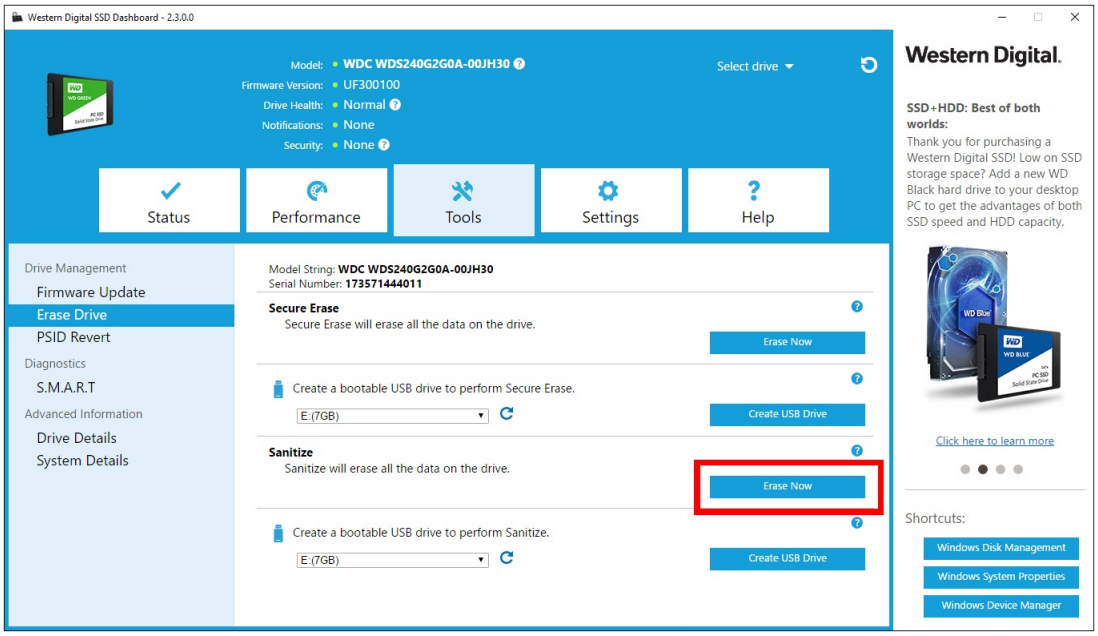
1. In the blue section at the top of the Dashboard, click the **Select drive** drop-down menu to select the SSD on which all user data will be permanently deleted.

   Note: If the SSD to be deleted is not listed, click the **Refresh** icon next to the Select drive drop-down menu to scan for the SSD.

   The name of the selected SSD appears next to **Model**.



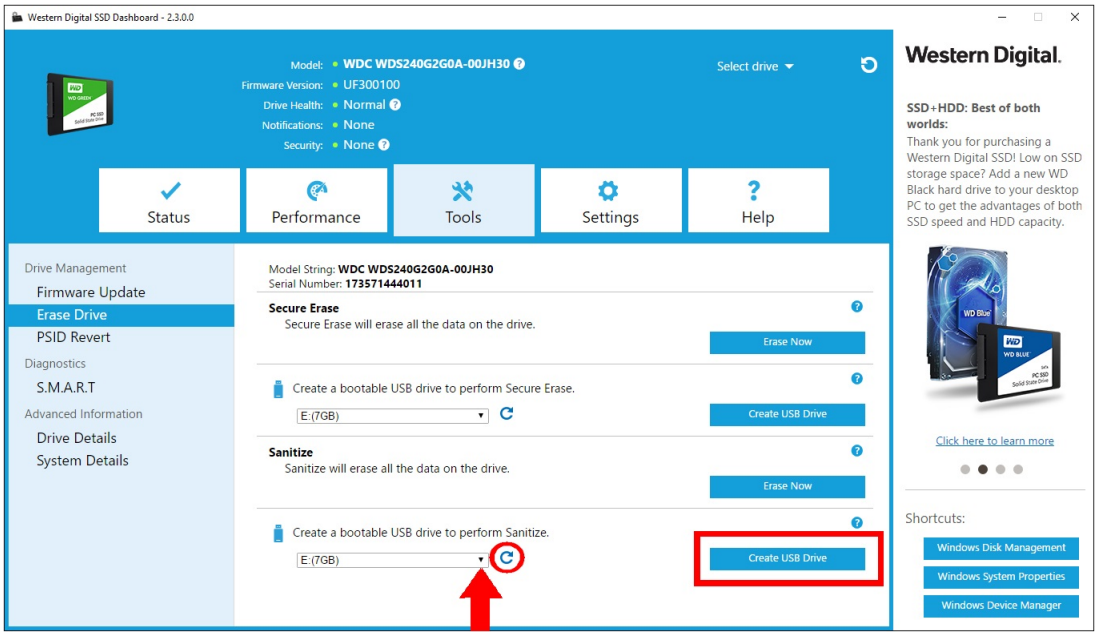
2. Click **Erase Now** next to **Sanitize** to delete all user data and leave the drive in an unformatted state.



Create a Bootable USB Drive with Sanitize

1. Insert a formatted USB drive.
2. Before proceeding, backup any existing data on the USB drive.
3. Click the **drop-down** list to select the USB drive.

Note: If the USB drive is not listed, click the **Refresh** icon next to the drop-down list to scan for the USB drive.

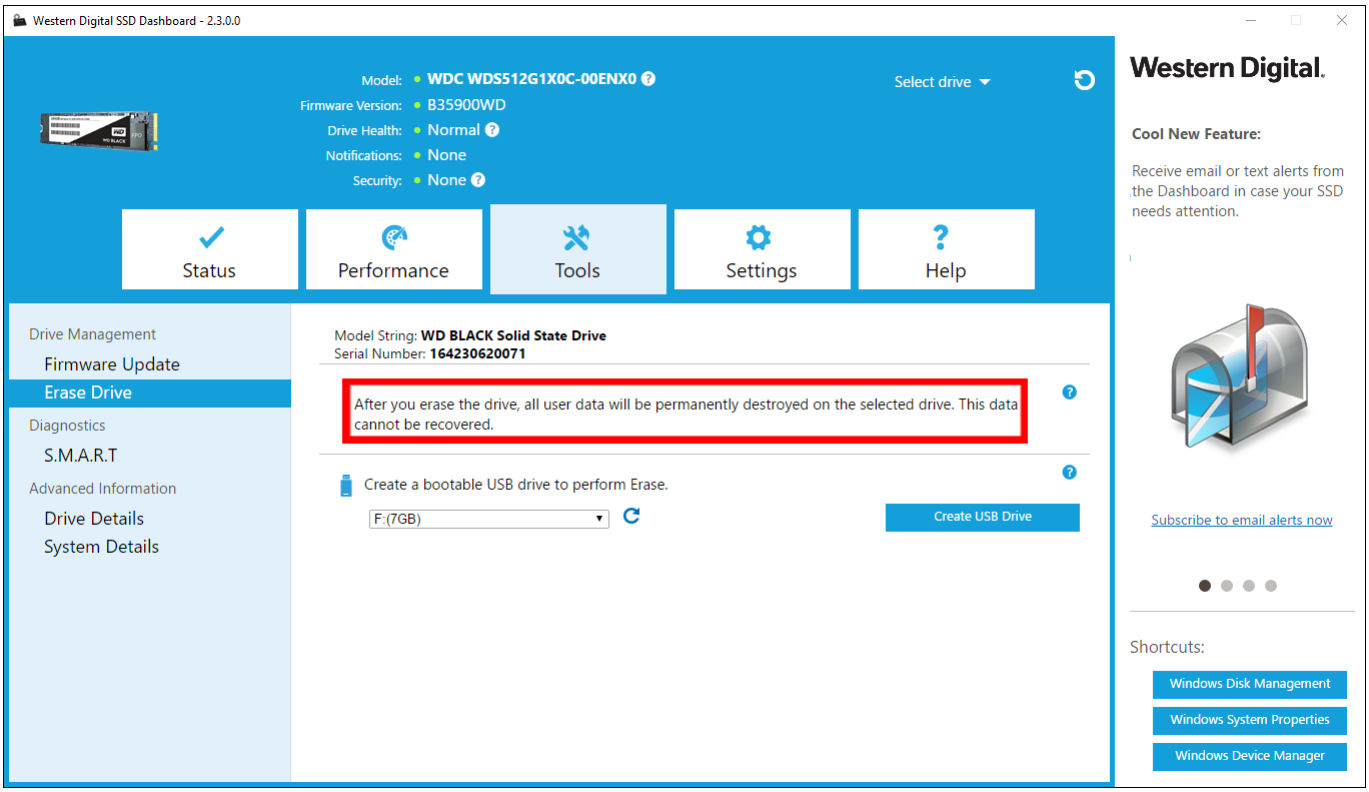


4. Click **Create USB Drive**.

Erase Drive (WD Black)

Erase Drive permanently destroys all user data on the selected SSD. This function currently only supports WD Black PCIe SSD, and it will not be visible unless a WD Black PCIe SSD is connected and detected by the Western Digital SSD Dashboard software.

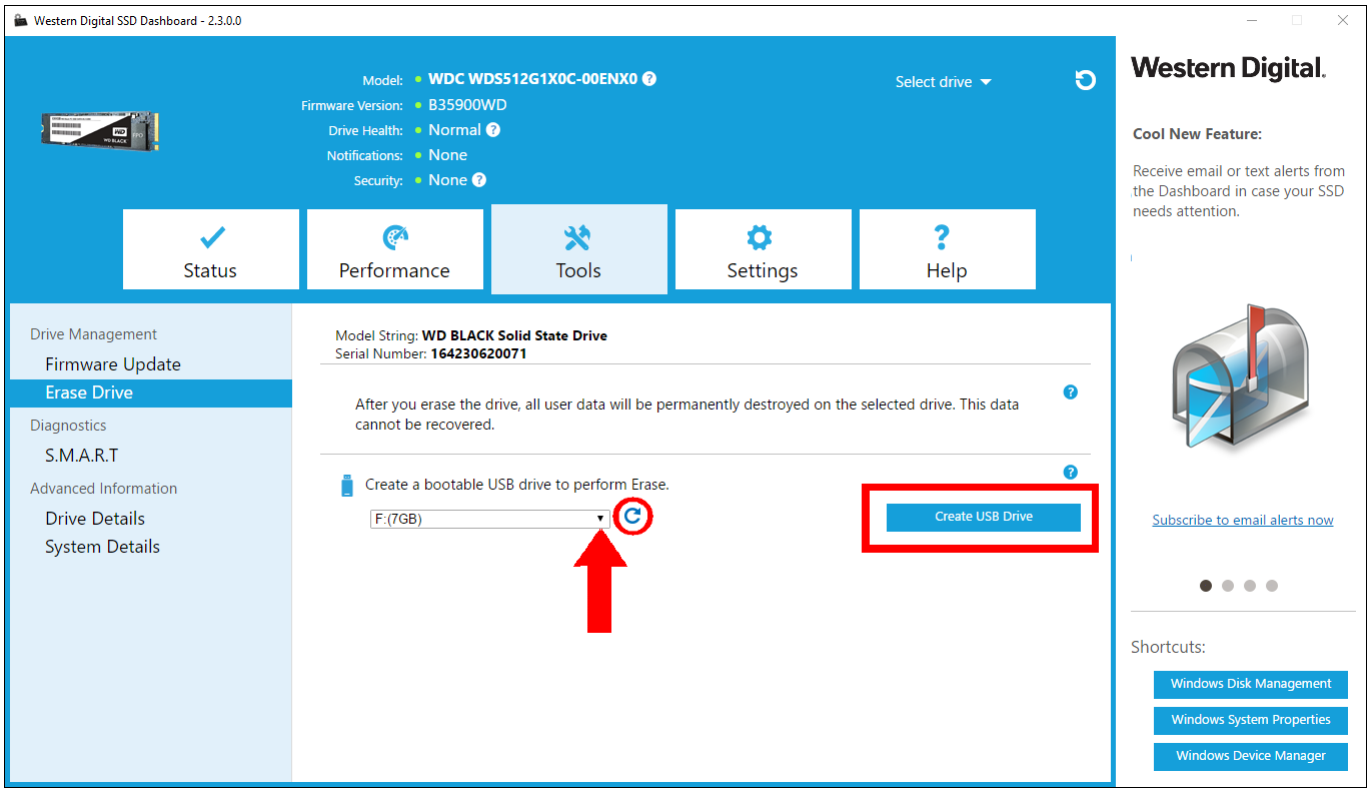
Note: Erase Drive deletes the mapping table on the selected SSD, but it does not erase all blocks that have been written to.



Bootable USB Drive for Erase Drive (WD Black)

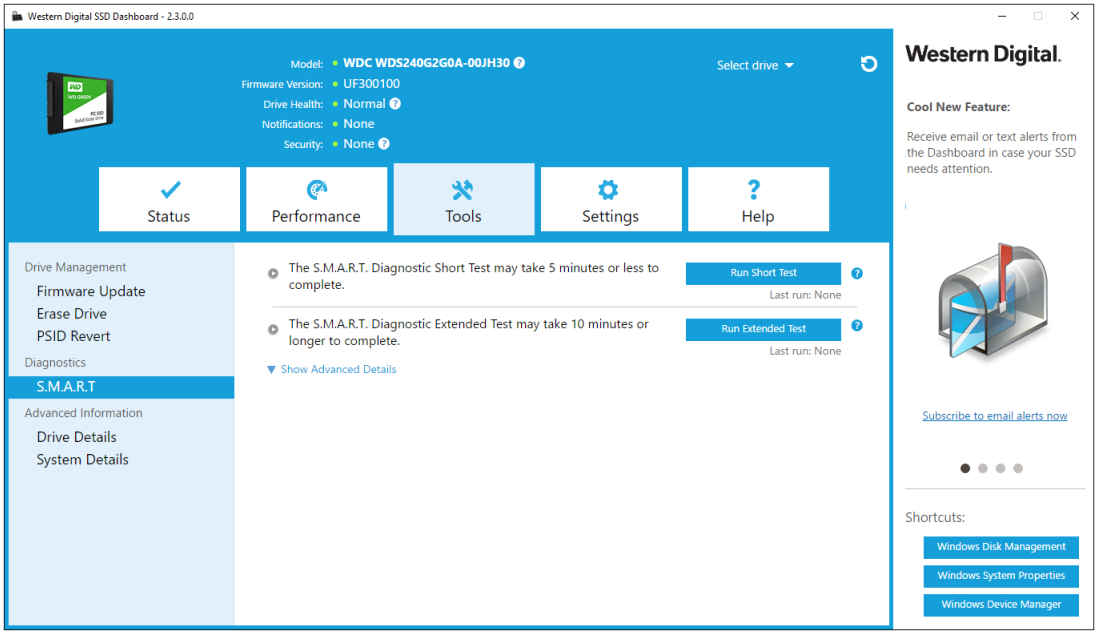
Note: The USB drive will be formatted as a FAT32 system.

1. Insert a formatted USB drive.
2. Before proceeding, backup any existing data on the USB drive.
3. Click the drop-down list to select the USB drive. Note: If the USB drive is not listed, click the Refresh icon next to the drop-down list to scan for the USB drive.
4. Click Create USB Drive.



S.M.A.R.T.

S.M.A.R.T. (Self-Monitoring, Analysis and Reporting Technology) is an industry-standard drive monitoring system.



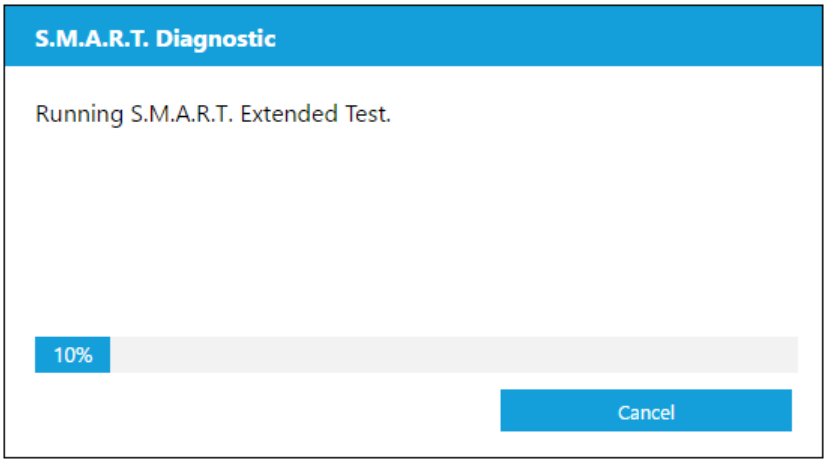
Diagnostic Short Test

The S.M.A.R.T. Diagnostic Short Test runs automatically run every time the Western Digital SSD Dashboard application is launched. It is a quick, drive health test as defined by the S.M.A.R.T. specification.

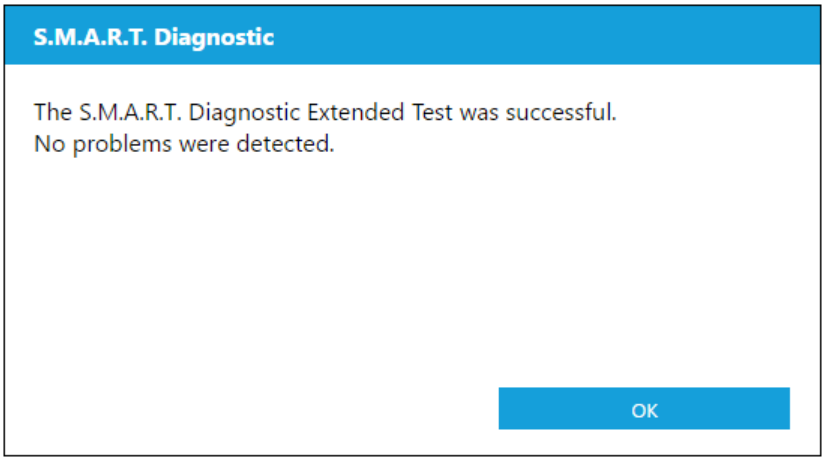
Note: For WD Black PCIe SSD in systems running iRST drivers, this diagnostic short/extended test is not supported due to driver limitations.

Diagnostic Extended Test

The S.M.A.R.T. Diagnostic Extended Test is an extended drive health test as defined by the S.M.A.R.T. specification. The Western Digital SSD Dashboard cannot be used while the test is running. However, you can cancel the test at any time.



If the test is successful, the progress status changes to a green, test complete message.



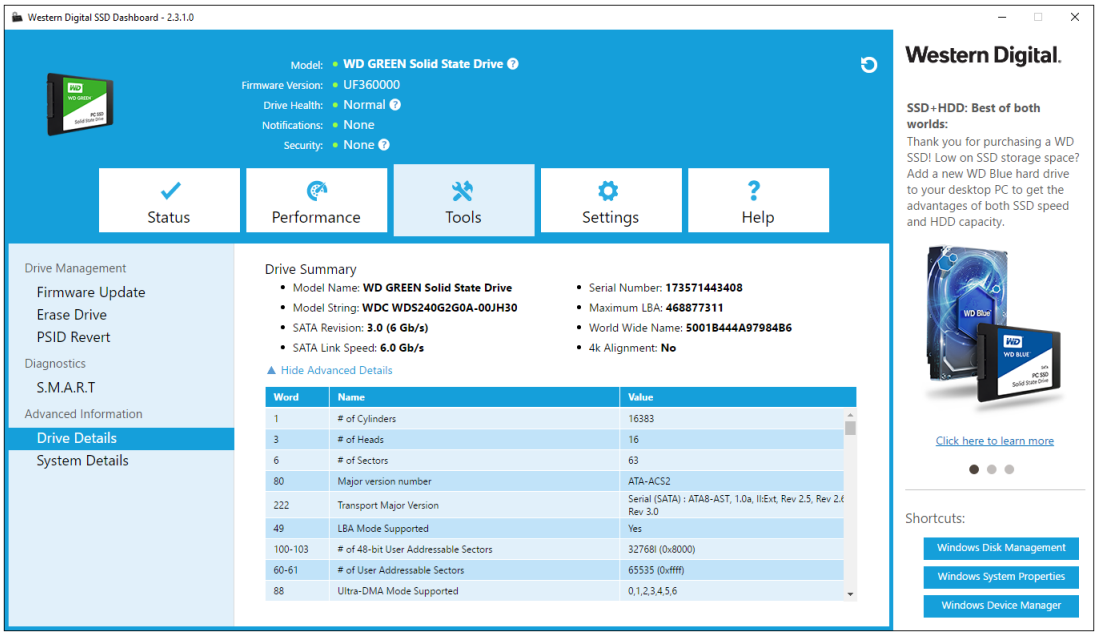
If the test is unsuccessful, click the provided link to go to the test details.

Drive Details

Drive Details displays the following information for the selected drive:

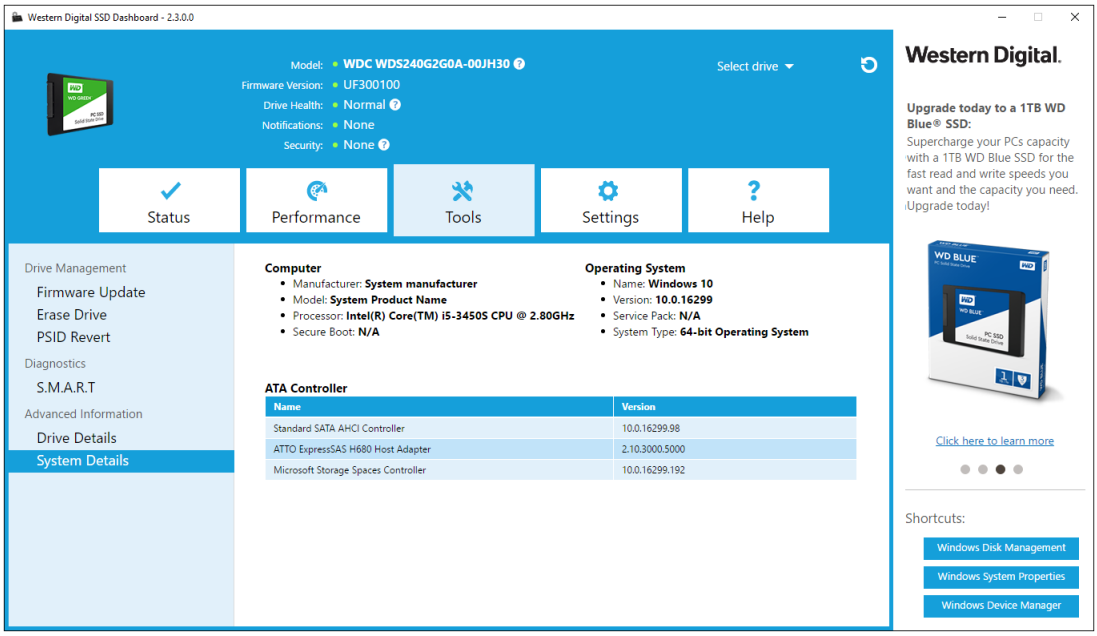
- Model Name
- Model String
- NVMe Revision / SATA Revision
- NVMe Link Speed / SATA Link Speed
- Serial Number
- Maximum LBA
- World Wide Name (a unique identifier used for storage technologies)
- 4K Alignment

For additional information, click **Show Advanced Details**.



System Details

System Details displays information about the operating system, computer hardware, and ATA controller(s) used in the system on which Western Digital SSD Dashboard is installed.


Western Digital SSD Dashboard - 2.3.0.0
Model: WDC WDS240G2G0A-00JH30
Firmware Version: UF300100
Drive Health: Normal
Notifications: None
Security: None
Select drive
Status
Performance
Tools
Settings
Help
Drive Management
Firmware Update
Erase Drive
PSID Revert
Diagnostics
S.M.A.R.T
Advanced Information
Drive Details
System Details
Computer
Manufacturer: System manufacturer
Model: System Product Name
Processor: Intel(R) Core(TM) i5-3450S CPU @ 2.80GHz
Secure Boot: N/A
Operating System
Name: Windows 10
Version: 10.0.16299
Service Pack: N/A
System Type: 64-bit Operating System
ATA Controller
Name
Version
Standard SATA AHCI Controller
10.0.16299.98
ATTO ExpressSAS H680 Host Adapter
2.10.3000.5000
Microsoft Storage Spaces Controller
10.0.16299.192
Western Digital.
Upgrade today to a 1TB WD Blue® SSD:
Supercharge your PCs capacity with a 1TB WD Blue SSD for the fast read and write speeds you want and the capacity you need. Upgrade today!
Click here to learn more
Shortcuts:
Windows Disk Management
Windows System Properties
Windows Device Manager

5 Settings

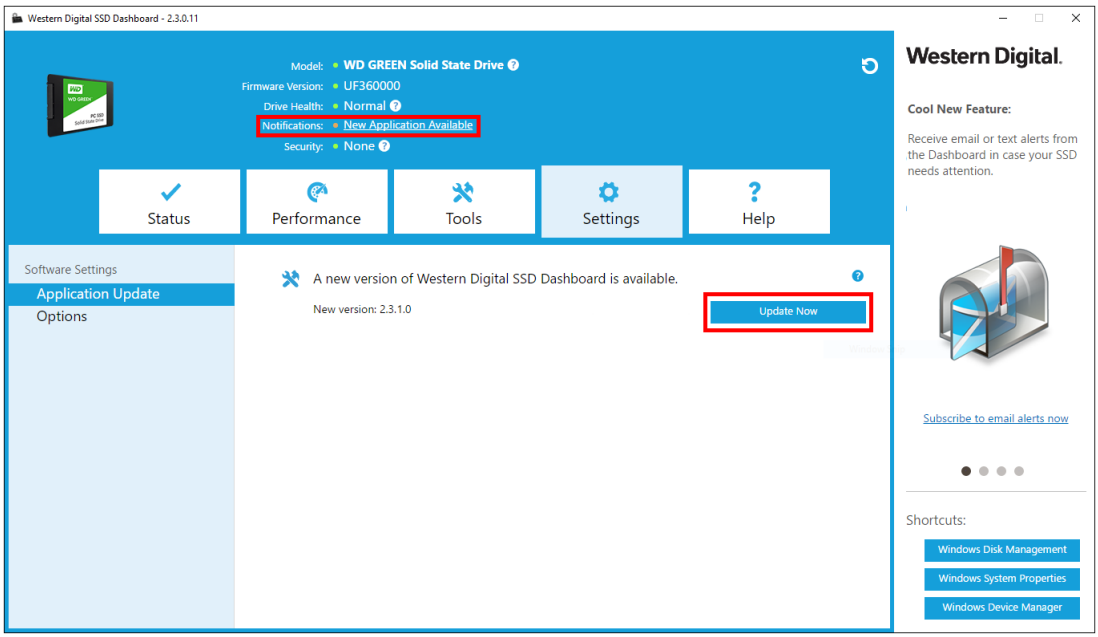
This chapter contains the following sections.

- Application Update
- Starting Western Digital SSD Dashboard with Windows Startup
- Select Language

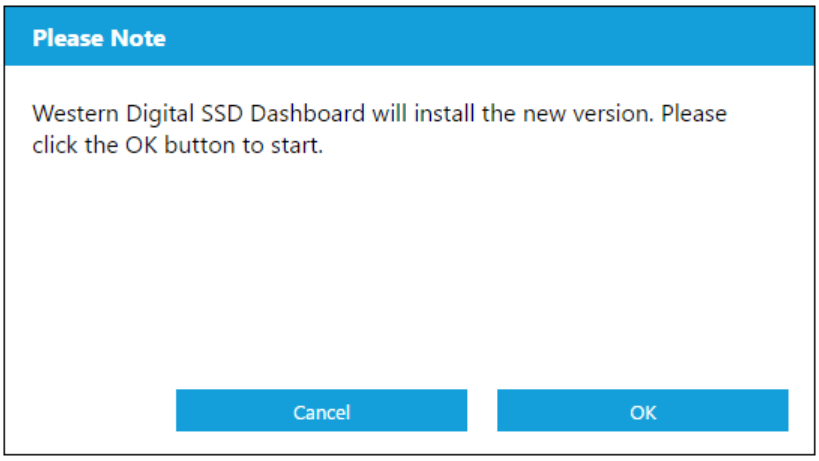
Application Update

If a newer version of the application is available, a message will be displayed in the Notifications area.

Clicking on the **New Application Available** link will take you to the Settings section, which will display the number of the new version available. Click on **Update Western Digital SSD Dashboard** to initiate the update.



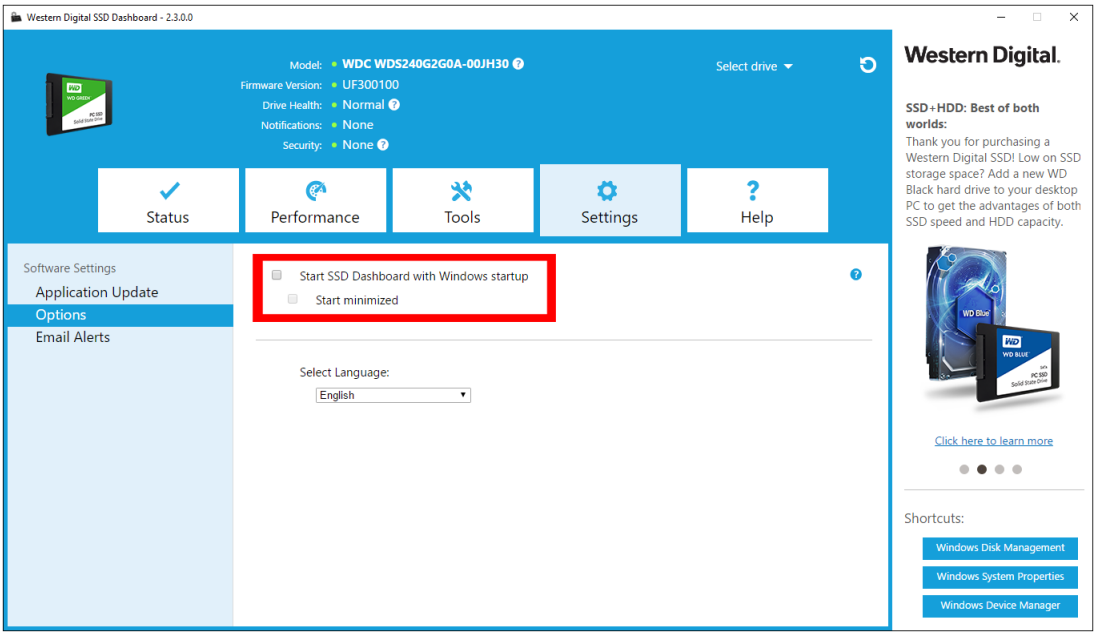
Click **OK** to confirm and proceed with the application update. After the update has finished downloading, the installation process will begin.



Starting Western Digital SSD Dashboard with Windows Startup

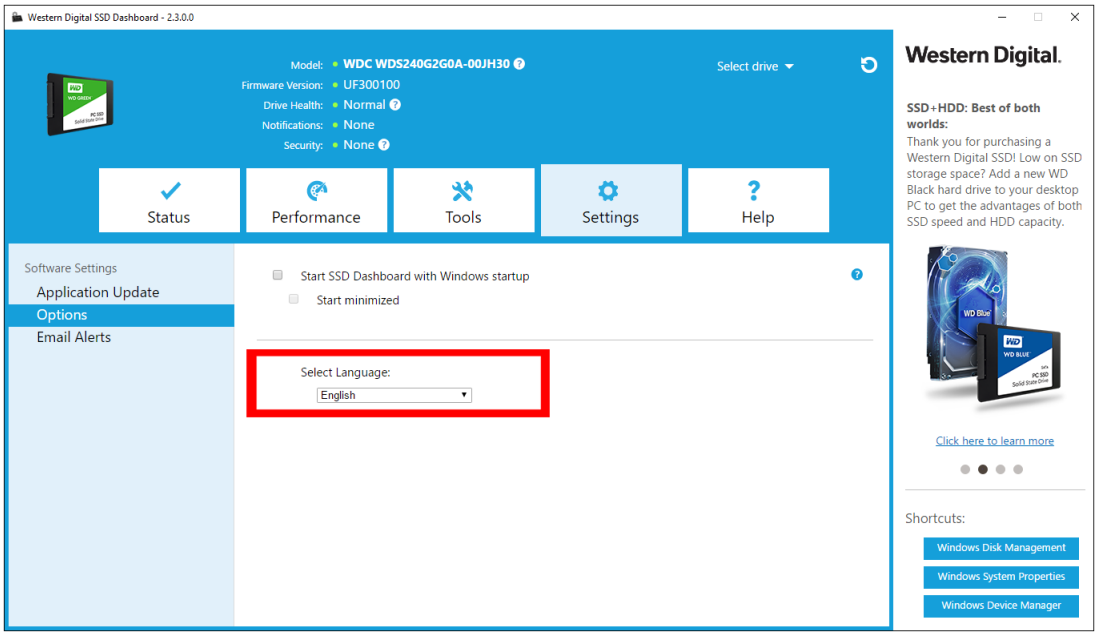
To launch the Western Digital SSD Dashboard at Windows startup, check **Start SSD Dashboard with Windows startup**.

To open the Western Digital SSD Dashboard in Windows' system tray on the taskbar, check **Start minimized**.



Select Language

Click the **Select Language** drop-down menu to select the display language of the Western Digital SSD Dashboard.


Western Digital SSD Dashboard - 2.3.0.0
Model: WDC WDS240G2G0A-00JH30
Firmware Version: UF300100
Drive Health: Normal
Notifications: None
Security: None
Select drive
Status
Performance
Tools
Settings
Help
Software Settings
Application Update
Options
Email Alerts
Start SSD Dashboard with Windows startup
Start minimized
Select Language:
English
Western Digital.
SSD+HDD: Best of both worlds:
Thank you for purchasing a Western Digital SSD! Low on SSD storage space? Add a new WD Black hard drive to your desktop PC to get the advantages of both SSD speed and HDD capacity.
Click here to learn more
Shortcuts:
Windows Disk Management
Windows System Properties
Windows Device Manager

6 Help

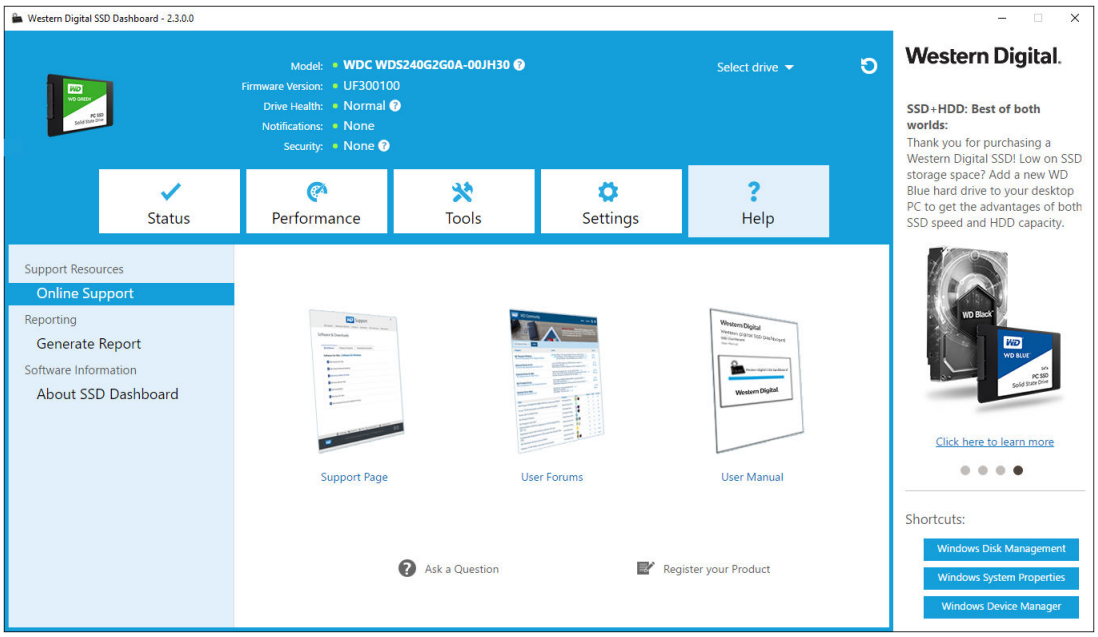
This chapter contains the following sections.

- Online Support
- Generate Report
- About Western Digital SSD Dashboard

Online Support

The Online Support section contains links to the Western Digital Support website, where you'll find product-specific information and user guides, a searchable Knowledge Base, and the Western Digital Community forum.

The Software & Downloads link takes you to the latest product and application software and firmware versions, and when specialized support is required, use the Get Help - Create a Support Case form.



Generate Report

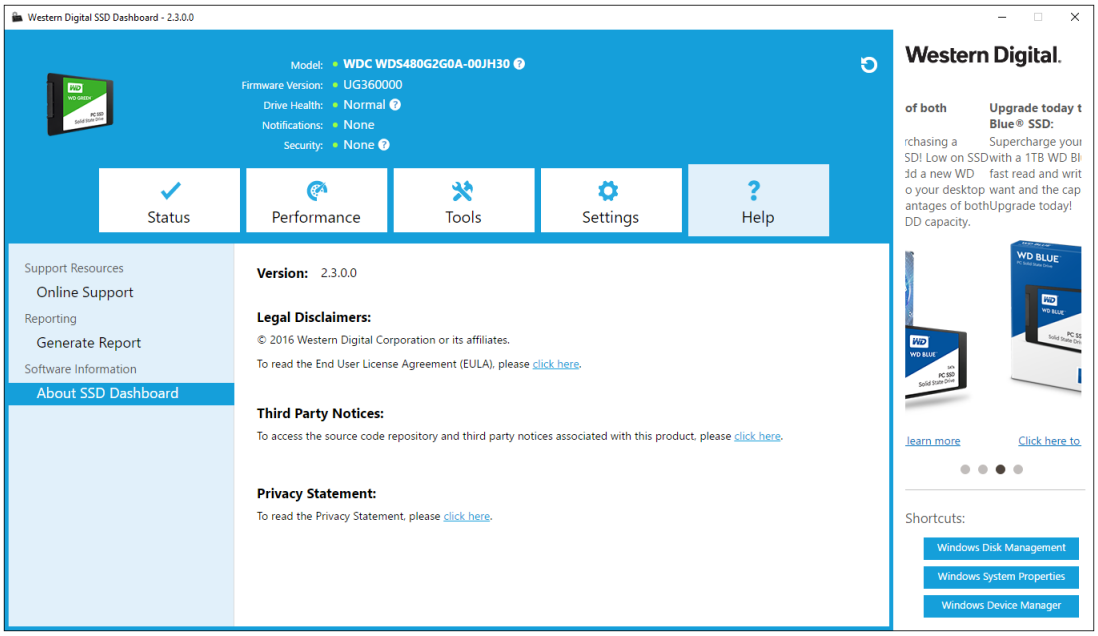
Click **Generate Report** to create and save a full system report that provides the detailed information required for certain support cases.

The Generate Report function generates two files:

- SSD_Dashboard_Report.csv
- SSD_Dashboard_Report_msinfo.txt.

About Western Digital SSD Dashboard

The About SSD Dashboard section contains the current version number of the Western Digital SSD Dashboard software, as well as links to the End User License Agreement (EULA), Third Party Notices, and the Western Digital Privacy Statement.



Western Digital
5601 Great Oaks Parkway
San Jose, California 95119 U.S.A.

4779–705161-A03 May 2018

WD Green™ SSD
(Solid State Drive)

For use in laptops and desktop computers, WD Green SSDs offer high performance and reliability to boost your daily computing activities. With comprehensive WD F.I.T. Lab™ certification, and available in 2.5"/7mm cased or M.2 2280 models, WD Green solid state drives are compatible with most PCs. The free WD SSD Dashboard lets you monitor your storage, and when combined with the 3-year limited warranty, upgrading your digital storage is worry-free.

INTERFACE
SATA III 6 Gb/s

FORM FACTOR
2.5"/7mm cased
M.2 2280

CAPACITY
120GB – 240GB

Product Features

Improved performance for everyday computing
Enhance your system with a WD Green solid state drive and help improve the performance of your laptop or desktop computer for your daily computing needs. SLC (single-level cell) caching technology helps boost write performance in a WD Green SSD to browse the web, play your favorite casual games, or simply start up your system in a flash.

Solid state reliability
WD Green SSDs are built to be lightweight and shock-resistant to help protect against data loss if a drive is accidentally bumped or dropped. Combined with the comprehensive WD Functional Integrity Testing Lab (F.I.T. Lab™) certification, every WD Green SSD is tested to ensure it meets the highest WD brand standards for digital storage. And with no moving parts in a WD Green SSD, you get reliable storage to withstand normal wear and tear for years to come.

Less power. More play.
WD Green solid state drives are among the lowest in power consumption in the industry. And with less power used, you can run your laptop PC for longer periods of time.

An easy upgrade for your PC
WD Green SSDs are available in a 2.5"/7mm cased model, and an M.2 2280 version to evolve with newer and smaller computers. With form factors to accommodate most laptop and desktop PCs, a WD Green SSD is ready for the job.

Free WD SSD Dashboard
The downloadable WD SSD Dashboard provides a suite of tools so you're always able to check on the health of your solid state drive. Available for free, this WD SSD Dashboard helps you track things like disk model, firmware version, S.M.A.R.T. attributes, or simply find out how much space you have left on your WD Green SSD.

3-year limited warranty
Every WD Green SSD comes with a 3-year limited warranty, so you can be confident of your storage when you upgrade or replace any of your drives.

Applications

WD Green SSDs are tested and recommended for use in desktop, all-in-one, and small form-factor PCs.

The WD Advantage

WD puts our products through extensive Functional Integrity Testing (F.I.T.) prior to any product launch. This testing ensures our products consistently meet the highest quality and reliability standards of the WD brand.

WD also has a detailed Knowledge Base with more than 1,000 helpful articles as well as software and utilities. Our customer support lines have long operational hours to ensure you get the help you need when you need it. Our toll-free customer support lines are here to help or you can access our WD Support site for additional details.

WD Green™ SSD

Specifications*	240GB	120GB
Model Numbers[1]		
WD Green SSD 2.5"/7mm cased	WDS240G2G0A	WDS120G2G0A
WD Green SSD M.2 2280	WDS240G2G0B	WDS120G2G0B
Interface[2,3]		
WD Green SSD 2.5"/7mm cased	SATA III 6 Gb/s	SATA III 6 Gb/s
WD Green SSD M.2 2280	SATA III 6 Gb/s	SATA III 6 Gb/s
Performance[4] [4KB QD32]		
Sequential Read up to (MB/s)	545	545
Power[5]		
Average Active Power (mW)	80	80
Max Read Operating (mW)	2,800	2,200
Max Write Operating (mW)	2,800	2,200
Slumber (mW)	30	30
DEVSLP (mW)	10	10
Reliability		
MTTF[6]	Up to 1.0M hours	Up to 1.0M hours
Environmental		
Operating Temperatures	0°C to 70°C	0°C to 70°C
Non-operating Temperatures	-55°C to 85°C	-55°C to 85°C
Operating Vibrations	5.0 gRMS, 10–2000 Hz	5.0 gRMS, 10–2000 Hz
Non-operating Vibrations	4.9 gRMS, 7–800 Hz	4.9 gRMS, 7–800 Hz
Shock	1,500 G @ 0.5 msec half sine	1,500 G @ 0.5 msec half sine
Certifications	FCC, UL, TUV, KC, BSMI, VCCI	FCC, UL, TUV, KC, BSMI, VCCI
Limited Warranty[7]	3 years	3 years
Physical Dimensions		
Size: 2.5"/7mm cased	7.00mm x 69.85mm x 100.50mm	7.00mm x 69.85mm x 100.50mm
Size: M.2 2280	1.5mm x 22.0mm x 80mm	1.5mm x 22.0mm x 80mm
Weight: 2.5"/7mm cased	32.2g, ± 0.5g	32.1g, ± 0.5g
Weight: M.2 2280	6.51g, ± 0.5g	6.46g, ± 0.5g

* Specifications subject to change without notice.

1 Not all products may be available in all regions of the world.

2 Backward compatible to SATA II and I.

3 As used for storage capacity, one megabyte (MB) = one million bytes, one gigabyte (GB) = one billion bytes, and one terabyte (TB) = one trillion bytes. Total accessible capacity varies depending on operating environment. As used for buffer or cache, one megabyte (MB) = 1,048,576 bytes. As used for transfer rate or interface, megabyte per second (MB/s) = one million bytes per second, and gigabit per second (Gb/s) = one billion bits per second. Effective maximum SATA 6 Gb/s transfer rate calculated according to the Serial ATA specification published by the SATA-IO organization as of the date of this specification sheet. Visit www.sata-io.org for details.

4 Performance is based on the CrystalDiskMark benchmark using a 1000MB LBA range on ASUS Z170A ATX desktop with Intel Z170 chipset, Intel i7-6700K 4.0GHz, 8M, Skylake, 8GB 2133MHz DDR4, Windows 10 Pro 64-bit using Intel iRST version 15.2.0.1020, secondary drive, C-state off. Performance may vary based on host device. 1 MB = 1,000,000 bytes. IOPS = input/output operations per second.

5 Measured using the MobileMark™ 2014 benchmark with DIPM (Device Initiated Power Management) enabled.

6 MTTF = Mean Time To Failure based on internal testing using Telcordia stress part testing.

7 See support.wdc.com for regional specific warranty details.

Western Digital
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Irvine, California 92612
U.S.A.

For service and literature:
support.wdc.com
www.wdc.com

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800.832.4778	Spanish
+86.21.2603.7560	Asia Pacific
00800.27549338	Europe (toll free where available)
+31.880062100	Europe/Middle East/ Africa

CAN ICES-3 (B) / NMB-3 (B)

2879-800083-A03 January 2018