Intel® Solid State Drive Toolbox

Release Notes

April 2016
Software Version 3.3.5

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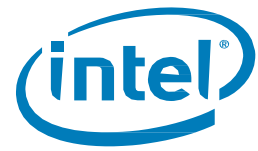
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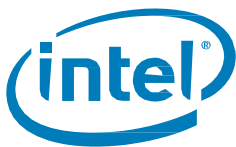
Revision History

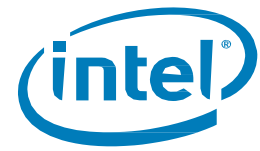| Date	Software Version	Description
April 2016	3.3.5	This release of the Intel® SSD Toolbox updates the signing certificate to a new SHA256 certificate. This will fix issues where the tool was being reported as "invalid" at download.
April 2016	3.3.4	Documentation update only This release of the Intel® SSD Toolbox includes support for the Intel® SSD 540s, Pro 5400s, E 5400s and E 5410s Series and the Intel® SSD DC S3100, DC P3320, DC D3700 and DC D3600 Series products.
March 2016	3.3.4	This release of the Intel® SSD Toolbox includes a firmware update for the Intel® SSD DC S3700, DC S3500, DC S3710, DC S3610 and DC S3510 Series products. For the Intel SSD DC S3700 Series, the latest firmware revision is 5DV12270. For the Intel SSD DC S3500 M.2 and DC S3500 HD Series, the latest firmware revision is G2010150. For the Intel SSD DC S3500 Series, the latest firmware revision is D2012370. For the Intel SSD DC S3710, DC S3610 and DC S3510 Series, the latest firmware revision is G2010150. The following changes are included in this firmware update: • Fixed SATA CRC errors seen when running at 3Gbps • Corrected SMART 05h behavior • Fixed power consumption on Staggered Spin-up. These latest firmwares include a fix for a specific use condition where in certain cases if the device receives a command that violates the SATA protocol specification, the drive may ASSERT or stop responding to host commands (See Intel Advisory INTEL-SA-00050).

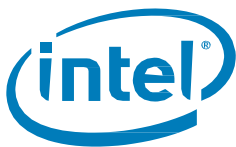| Date	Software Version	Description
November 2015	3.3.3	This release of the Intel® SSD Toolbox includes a firmware update for the Intel® SSD 750 Series. The latest firmware revision is 8EV10174. The latest bootloader revision is 8B1B0131 (no change). The following changes are included in the Intel SSD 750 Series firmware update: • Fixed LED behavior to appear LED-On when drive active and LED-Off when drive idle. • Fix for some use cases where user data may be inaccessible or at risk of loss. (see Intel Advisory INTEL-SA-00047) • Misc. sightings closure and improvement on product health. This release also includes the following tool fixes: • Fix to firmware update process – handling drives in failure states. Known compatibility issues with RAID volume configurations using RST version 13.2+
October 2015	3.3.2	This release of the Intel® SSD Toolbox includes a firmware update for the Intel® SSD 750 Series. The latest firmware revision is 8EV10171. The latest bootloader revision is 8B1B0131. The following changes are included in the Intel SSD 750 Series firmware update: • Vendor Unique Command to change SM BUS address on "NVMe* Basic Management Command" • Improved TRIM IOPS operation • In-field Drive Configuration Update capability • Windows* Driver update with bug fixes • Misc. sightings closure and improvement on product health This release also includes the following tool fix • Fixed issue with the reading of the SMART / Health Log with latest firmware on NVMe products.

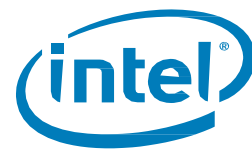| Date	Software Version	Description
August 2015	3.3.1	This release of the Intel® SSD Toolbox includes firmware updates for the Intel® SSD Pro 2500 and Intel® SSD 535 Series and the Intel® SSD DC S3710, DC S3610, DC S3510, DC S3500 M.2 and DC S3500 HD Series products. The following changes are included in the Intel SSD Pro 2500 and 535 Series firmware update: • (Specific to the Pro 2500 Series only) DevSleep wake optimizations for more robust resume after devsleep • Fix for Windows* disk error occurring after devsleep on systems with ATA user password • Fix for I/O abort due to Sanitize Freeze Lock after COMRESET • Fix for Drive Self-Test reporting incorrect status after test abort The following changes are included in the Intel® SSD DC S3710, DC S3610, DC S3510, DC S3500 M.2 and DC S3500 HD Series firmware Update: • Added support for SMART Attribute F3h • Modification to Secure Erase to include NAND Erase • Improvements to the Maximum Latency for all Sequential and Random Write workloads • Added a fourth PHY mode setting to accommodate long interconnects (> 8-inches) This release also includes the following tool fix • Correction to Drive Health reporting of NVMe products
May 2015	3.3.0	This release of the Intel® SSD Toolbox adds support for the new Intel® SSD 750 and 535 Series, as well as adds NVMe support for all existing Toolbox features.
July 2014	3.2.3	This release of the Intel® SSD Toolbox adds support for the Intel® SSD Pro 2500 Series and other Intel SSD products. It also fixes the issue of displaying drives larger than 1TB.

Date	Software Version	Description
February 2014	3.2.1	This release of the Intel SSD Toolbox includes firmware updates for both Intel SSD DC S3700 and DC S3500 products with the following changes: • In the unlikely event that a drive fails, the drive will now report the correct serial number and actual capacity. The error code is available in ID block word 140 and GPL address 0xDD. • When a power-off is less than 500ms the drive will automatically reset and allow proper drive enumeration. • Support for both 512B and 4KB physical sector size • As blocks are retired, the SMART E8h value will decrease linearly. • After a power cycle, timed workload variables will resume from the last saved values and update after 60 minutes and every minute thereafter. • SMART Attribute 05h now has a normalized value of 100. • SMART Attribute C2h now reports the correct temperature.
December 2013	3.2.0	This version of the tool contains a firmware update for the Intel® SSD 530 Series (to version DC31 for M.2 drives, DC32 for 2.5" drives and DC33 for mSATA drives) with the following changes: • Default Software Settings Preservation (SSP) for DIPM is changed from a default = on, to a DEFAULT = OFF. This addresses situations in older systems where the drive was not found after a warm reset causing blue screens. • Corrects an occasional miss-reporting of SMART attribute E3h (Timed Workload Read/Write ratio). • The drive no longer increments SMART 0Ch (Power Cycle Count) after a SECURE ERASE operation.
October 2013	3.1.9	This release of the Intel SSD Toolbox includes the following improvements: • Support for new Intel SSD product names • Changed SMART attributes AF, BE, EA to represent RAW values in HEX while the breakouts of each attribute will be decimal. • Fixed an issue when a physical drive is missing from a storage space.

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August 2013	3.1.8	This release of the Intel SSD Toolbox includes a firmware release which contains the following: • Intel® SSD 530 Series firmware update to DC12 which addresses an occasional drive hang after resume from Link Power Management slumber state. Other tool related items are: • Added new descriptions for SMART attributes C2, C5, EA and F9 • Corrected calculations for E1, F1 and F2 SMART attributes. • Corrected the display of word 79 in the Drive Details screen
July 2013	3.1.6	This release contains the following: Intel® SSD DC S3500 Series firmware update to 0355 which: • Provides an update to the SMART Error Log after the download microcode command is executed. • Other ongoing improvements were made to address manufacturability and IOPs consistency. This release also adds a tool update to return many of the SMART RAW values to integers from hexadecimal numbers and adds support for drives starting with a serial number of EK.
June 2013	3.1.5	This release contains the following: Intel® SSD DC S3700 Series firmware update to 0265 which fixes the following issues: • The drive may exhibit longer latency behind certain HBA/RAID cards under specific sequential workloads. • SMART attribute EAh was not correctly incrementing • The drive may return an incorrect response or become unresponsive to an LBA write above a 32-bit address Intel® SSD 335 Series firmware update to 335u which provides continuous improvement optimizations intended to provide the best possible user experience with the Intel SSD. This release adds the following tool updates: • Support for additional new Intel SSDs • Enhanced Optimizer scheduling functionality • Improved installation performance • Improved SMART Details output • Updated Drive Details output
November 2012	3.1.2	This release adds a firmware update for the Intel® SSD 335 Series fixing the following issue: • Incorrect reporting of the E9h media wear indicator value
October 2012	3.1.1	This release fixes a condition where some Intel® SSDs are being incorrectly reported as degraded.

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October 2012	3.1.0	This release adds support for Microsoft* Windows* 8 and Server 2012, Trim on RAID 0 with RST 11.0 or greater (NOTE: Trim on RAID 0 is not supported on Windows 8 or Server 2012), Plug-n-Play support for dynamically detecting drive removal and insertion events, proactive tool update notification for Windows 7 and Windows 8 systems and fixes Intel SSD Optimizer error on partitions configured with an allocation size of 32KB or 64KB.
September 2012	3.0.5	This release fixes an issue where all multi-language resource files were not displayed correctly.
September 2012	3.0.4	This release adds support for new Intel SSDs
April 2012	3.0.3	This release adds the following features: • Support for the Intel® SSD 330 Series • Definitions for SMART attributes B1h, B5h, B6h, and F9h This release corrects a bug where Identify Device word 214 was displaying the value for word 209.
December 2011	3.0.2	This release fixes the following issues: • Scheduled Intel SSD Optimizer sessions do not run on encrypted Intel SSDs • Intel® SSD Optimizer does not run if Microsoft Windows* compression is enabled on any partition • Intel® SSD 320 Series updates to incorrect version number on Lenovo* platforms (LE02 instead of LE04) • SMART details do not display if SMART is disabled in IDENTIFY DEVICE status on the drive.
November 2011	3.0.1	This release corrects how the model number displays on the home screen for the 50nm MLC (2.5-inch form factor) Intel SSD. The SSD now appears as Intel® SSD X25-M instead of Intel® SSD X25-E.
October 2011	3.0.0	This release includes a new user interface and adds support for: • Updating firmware on supported Intel® SSDs • Viewing drive health • Viewing estimated drive life remaining This release also contains an integrated help system and adds support for multiple languages.
October 2010	2.01	This release contains improvements to the Secure Erase feature and resolves intermittent timing issues that were occurring on a few platforms.
September 2010	2.0	This release contains these new features: System Configuration Tuner Secure Erase
March 2010	1.3	This release consists of continuous improvement changes.

Date	Software Version	Description
December 2009	1.2	This release fixes problems with unusable system restore points, adds progress bars for diagnostics and Intel® SSD Optimizer functions, and incorporates improvements to look and feel.
October 2009	1.1	Initial Release.