



# Solidigm™ GUI Storage Tool

## Release Notes

September 2024

Revision 018

Solidigm Confidential

**SOLIDIGM™**

## Revision History

Revision	Software Revision	Description	Date
001	1.0	This is the first revision of the Solidigm™ Storage Tool (SST). This version of the tool contains below fixes; and the functionality of many current tools, see the User Guide for more information, with support for Intel® / Solidigm™ client and data center SSD.	March 2022
002	1.1	<ul style="list-style-type: none"> <li>• Adds a firmware update for 670p, 665p, 660p, 760p, Pro 7600p, Pro 6000p, E6100p P3100 and P4101.</li> <li>• CVE document update (see Solidigm Advisory SOLIDIGM-SA-00563)</li> </ul>	May 2022
003	1.1	Documentation Correction	May 2022
004	1.2	Firmware update for D7-P5510, D5-P5316, D3-S4520 / S4620	July 2022
005	1.3	<ul style="list-style-type: none"> <li>• Firmware update for D3-S4510 / S4610</li> <li>• Added HMC feature support for P41 Plus</li> <li>• Various bug fixes and small enhancements</li> </ul>	Sept. 2022
006	1.4	<ul style="list-style-type: none"> <li>• Added ability for workload tracker</li> <li>• Ended ESXi 6.x support due to the end of support from VMWare</li> <li>• Various bug fixes and small enhancements</li> </ul>	Dec. 2022
007	1.5	<ul style="list-style-type: none"> <li>• Firmware update for D3-S4510 / S4610</li> <li>• Various bug fixes and small enhancements</li> </ul>	January 2023
008	1.6	<ul style="list-style-type: none"> <li>• Firmware update for P41 Plus</li> <li>• Added CSV File Type export on GUI for Data extraction</li> </ul>	February 2023
009	1.7	<ul style="list-style-type: none"> <li>• Firmware update for D3-S4520 / S4620 and D7-P5520 / P5620</li> <li>• Added ability to bypass full system device scan when user provides device path</li> <li>• Fixed some SST command issues on Microsoft NVMe Inbox Driver</li> <li>• Various bug fixes and small enhancements</li> </ul>	March 2023
010	1.8	<ul style="list-style-type: none"> <li>• Fixed the issue of certain drives not showing drive temperature</li> </ul>	May 2023
011	1.9	<ul style="list-style-type: none"> <li>• Firmware update for D3-S4510 / S4610, D5-P5316 and D5-P5430</li> <li>• Various bug fixes and small enhancements</li> </ul>	July 2023
012	1.10	<ul style="list-style-type: none"> <li>• Firmware update for D7-P5510</li> <li>• Various bug fixes and small enhancements</li> </ul>	Sept. 2023
013	1.11	<ul style="list-style-type: none"> <li>• Firmware update for selected D7-P5510 drives</li> <li>• Firmware update for P5520/P5620</li> <li>• Firmware update for S4520/S4620</li> <li>• Updated LSI MegaRAID library for newer cards support</li> </ul>	Dec. 2023

Revision	Software Revision	Description	Date
014	1.12	<ul style="list-style-type: none"> <li>Firmware update for selected D7-P5810</li> <li>Fix for firmware update not available for few D7-P4511 models</li> <li>Fixed issue of devices enumerating as SCSI in RHEL 7</li> <li>Added support for new models for various products</li> <li>Various small bug fixes and enhancements</li> </ul>	March 2024
015	1.13	<ul style="list-style-type: none"> <li>Firmware Update for D5-P5336 Series to 5CV10302</li> <li>Firmware Update for D7-P5500 / P5600 Series to 2CV10300</li> <li>Added additional model support for S4510 series</li> <li>Added support for Hardware Component Log page</li> <li>Added support for Telemetry Data Area 4</li> <li>Product family updated for various models</li> <li>Fixed issue that caused Read Scan failure in Windows</li> </ul>	June 2024
016	1.14	<ul style="list-style-type: none"> <li>Firmware Update for D7-P5510 OPAL SKU to JCV10501</li> <li>Firmware Update for D7-P5510 Non-OPAL SKU to JCV10500</li> <li>Firmware Update for D7-P5520 / P5620 to 9CV10490</li> <li>Updated Media Wearout messaging</li> <li>Updated Status Messages with more clarity</li> <li>Updated to latest library from Broadcom for 9500 Series</li> <li>Added support for Broadcom 9600 Series MegaRAID (Beta)</li> <li>Changed SMART Warning Composite Temperature Time flagging from Failure to Alert</li> <li>Changed PLL Lock Loss flagging from Failure to Alert</li> <li>Various small bug fixes, enhancements and model support</li> </ul>	Aug. 2024
017	1.15	<ul style="list-style-type: none"> <li>Firmware update for D3-S4520 / S4620 to 7CV10141</li> <li>Updated to latest library from Broadcom for 9600 Series</li> <li>Various small bug fixes, enhancements and model support updates</li> </ul>	Sept. 2024
018	2.00	<ul style="list-style-type: none"> <li>Firmware Update for P41 Series to 004C</li> <li>Added support for Solidigm D7-PS1010 Series</li> <li>Removed Firmware Updates for end of life products</li> </ul>	Sept. 2024

**Note:** If you purchased your Intel® / Solidigm™ SSD from an OEM, your firmware version may have a different naming sequence. Contact your local OEM representative for the latest firmware revisions.

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# 1 Solidigm Data Center SSD Products Revision History

Table 1: Solidigm™ D7-P5336

Date	Revision	Description
June 2024	5CV10302	Mitigates the following issues besides come other minor/corner case fixes: <ul style="list-style-type: none"> <li>• Firmware Downgrade Counter not incrementing on first downgrade after reset</li> <li>• High queue-depth sequential temporary performance degradation after long idle periods</li> <li>• Failure to commit same firmware as active when using firmware download and activate command with activate action = 3</li> <li>• FIPS/OPAL drives only: incorrect parameters returned when traversing TCG ACE table UIDs via TableNext method</li> </ul>

Table 2: Solidigm™ DC-P5500 / P5600

Date	Revision	Description
June 2024	2CV10300	<ul style="list-style-type: none"> <li>• Mitigates the following issues besides come other minor/corner case fixes:                             <ul style="list-style-type: none"> <li>- Environment that does not Implement Required Command Ordering Enforcement May Cause Drive to Return Last Data Written to NAND</li> <li>- Incorrect NMVe MI Response Message Status During Drive's Time To Ready</li> <li>- Following Ungraceful Shutdown, admin / IO commands may Timeout After Config Ready Bit is Set</li> </ul> </li> </ul>

Table 3: Solidigm™ D7-P5810

Date	Revision	Description
March 2024	1CV10200	1.6TB SKU only <ul style="list-style-type: none"> <li>• Mitigates the following issues besides some other minor/corner case fixes:                             <ul style="list-style-type: none"> <li>- Support for 1.6TB SKU</li> </ul> </li> </ul>

Table 4: Solidigm™ D7-P5520 / P5620 (formerly Intel®)

Date	Revision	Description
Aug. 2024	9CV10490	<ul style="list-style-type: none"> <li>• Mitigates the following issues besides some other minor/corner case fixes:                             <ul style="list-style-type: none"> <li>- Admin Command Timeout During Read Intensive Workloads</li> <li>- Drive May Fail to Enumerate Following Unplanned Power Cycle</li> <li>- Failure of MOS-FET Component Leads to Higher Drive Failure Rate</li> </ul> </li> </ul>

Table 4: Solidigm™ D7-P5520 / P5620 (formerly Intel®)

Date	Revision	Description
Dec. 2023	9CV10450	<ul style="list-style-type: none"> <li>• Mitigates the following issues besides some other minor/corner case fixes:                             <ul style="list-style-type: none"> <li>- NVMe-MI Basic Throttle State Value May Persist After Exiting Throttling State</li> <li>- Power Management Set Feature Command sent Over NVMe MI Causes Drive to go into Disable Logical Mode</li> <li>- Vendor Unique Feature Identifier C6h Not Reflecting Power Mode Setting Changes Made with Feature Identifier 02h</li> <li>- Drive May Fail to enumerate During Drive Boot Up Sequence</li> </ul> </li> <li>• PCIe Link up Sequence May Fail During AC/DC Cycle</li> </ul>
March 2023	9CV10410	<ul style="list-style-type: none"> <li>• Mitigates the following issues besides some other minor/corner case fixes:                             <ul style="list-style-type: none"> <li>- Non-Graceful Shutdown Counter Not Incrementing During Unsafe Shutdowns within DEh Log Page</li> <li>- UEFI Driver Health Status GetHealthStatus Returning Unsupported</li> <li>- PCIe Unsupported Request Errors Observed by Host during Drive Power Cycle</li> <li>- Drive De-Enumeration During PCIe Link Up Sequence</li> <li>- Intermittent Failure During Drive Boot Sequence Causes No Drive Attached</li> <li>- Incorrect NVMe MI Response Message Status During Drive's Time to Ready</li> </ul> </li> </ul>

Table 5: Solidigm™ D7-P5510 (formerly Intel®)

Date	Revision	Description
Aug. 2024	OPAL: JCV10501  Non-OPAL: JCV10500	OPAL drives only: <ul style="list-style-type: none"> <li>• Mitigates the following issues besides some other minor/corner case fixes:                             <ul style="list-style-type: none"> <li>- Failure of a MOS-FET component leads to failure in the power delivery circuitry of the drive</li> <li>- I/O error exception after NVMe reset command</li> <li>- Drive may fail to enumerate during boot up sequence</li> <li>- Telemetry check may return wrong value for Firmware revision</li> </ul> </li> </ul>
Dec. 2023	JCV10404	OPAL drives only: <ul style="list-style-type: none"> <li>• Mitigates the following issues besides some other minor/corner case fixes:                             <ul style="list-style-type: none"> <li>- Allow the Opal drive to undergo an MR3 update without the drive becoming locked</li> <li>- Adjustments to wear levelling mechanism</li> <li>- Mitigate issue that cause drive to return last data written to NAND</li> </ul> </li> </ul>
Sept. 2023	JCV10400	Non-OPAL drives only: <ul style="list-style-type: none"> <li>• Mitigates the following issues besides some other minor/corner case fixes:                             <ul style="list-style-type: none"> <li>- Environment that does not Implement Required Command Ordering Enforcement may cause drive to return last data written to NAND</li> <li>- Drive may encounter bad_ctx 3014 due to wear leveling</li> </ul> </li> </ul>

Table 5: Solidigm™ D7-P5510 (formerly Intel®)

Date	Revision	Description
July 2022	JCV10300	<ul style="list-style-type: none"> <li>• NAND Read Disturb Impact Due to Unique NAND Background Activity Fix</li> <li>• BM459 Assert No Available Band/Erase Block Fix</li> <li>• Other various fixes and improvements</li> </ul>

Table 6: Solidigm™ D5-P5430

Date	Revision	Description
July 2023	6CV10110	<ul style="list-style-type: none"> <li>• Mitigates the following issues besides some other minor/corner case fixes:                             <ul style="list-style-type: none"> <li>- Environment that does not Implement Required Command Ordering Enforcement may cause drive to return last data written to NAND</li> <li>- Host OS fails to boot with the Vendor Defined Firmware option</li> </ul> </li> </ul>

Table 7: Solidigm™ D5-P5316 (formerly Intel®)

Date	Revision	Description
July 2023	ACV10340	<ul style="list-style-type: none"> <li>• Mitigates the following issues besides some other minor/corner case fixes:                             <ul style="list-style-type: none"> <li>- Environment that does not Implement Required Command Ordering Enforcement may cause drive to return last data written to NAND</li> <li>- PCIe unsupported request errors observed by host during drive power cycle</li> </ul> </li> </ul>
July 2022	ACV10310	<ul style="list-style-type: none"> <li>• Add additional support for OPAL 2.0, NVMe 1.4c, NVMe-MI 1.1c, and OCP 0xC0 Log Page</li> </ul>

Table 8: Solidigm™ D3-S4520 / S4620 (formerly Intel®)

Date	Revision	Description
Sept. 2024	7CV10141	<ul style="list-style-type: none"> <li>• Mitigates the following issues besides some other minor/corner case fixes:                             <ul style="list-style-type: none"> <li>- Failure of a MOS-FET component leads to failure in the power delivery circuitry of the drive</li> <li>- Drive hang after uncorrectable read</li> </ul> </li> </ul>
Dec. 2023	7CV10130	<ul style="list-style-type: none"> <li>• Mitigates the following issues besides some other minor/corner case fixes:                             <ul style="list-style-type: none"> <li>- SMART return status 2CF4H, and SMART attribute AFh and EBh = 1 after ~2 years storage without power, indicating PLI capacitor test failure (U.2 FF only)</li> <li>- Drive did not correctly throttle when end of life defect threshold was reached</li> <li>- Unable to format and possible de-enumeration during installing image operation containing crypto scramble command</li> </ul> </li> </ul>

Table 8: Solidigm™ D3-S4520 / S4620 (formerly Intel®)

Date	Revision	Description
March 2023	7CV10120	<ul style="list-style-type: none"> <li>Mitigates the following issues besides some other minor/corner case fixes:                             <ul style="list-style-type: none"> <li>SMART attribute AFh and EBh was going to 1 after ~2years of storage without power, when the PLI capacitor was in fact healthy</li> <li>A non-warranty SMART attribute C5h (pending sector count) was increasing in a corner case scenario</li> </ul> </li> </ul>
July 2022	7CV10111	<ul style="list-style-type: none"> <li>Mitigates the following issues besides some other minor/corner case fixes:                             <ul style="list-style-type: none"> <li>Command timeouts CI054, sometimes followed by ASSERT_SR002 and The SATA link going down.</li> <li>AFh Smart attribute accidentally drops from 100 to 1 upon power on or power cycle. False failure of the cap test. However, nothing is/was wrong with the capacitor.</li> <li>SMART attribute B7h SATA downshift counter not updating accurately when a SATA downshift occurs.</li> <li>SSD warm reboot issue in RAID mode: BIOS hangs and drive not enumerating after OS install and warm reset in RAID mode</li> </ul> </li> </ul>

Table 9: Solidigm™ D3-S4510 / S4610 (formerly Intel®)

Date	Revision	Description
July 2023	XCV10165 (2.5")	<ul style="list-style-type: none"> <li>Follow up fix for SMART attributes (AFh, EBh) incorrectly triggered after long-term storage (Only 2.5" SKUs are impacted)</li> <li>SMART return status fix</li> </ul>
Jan. 2023	XCV10160 (2.5")	<ul style="list-style-type: none"> <li>Mitigates the following issues:                             <ul style="list-style-type: none"> <li>SMART attributes (AFh, EBh) incorrectly triggered after long-term storage (Only 2.5" SKUs are impacted)</li> </ul> </li> </ul>
Sept. 2022	XC311151 (M.2) XCV10151 (2.5")	<ul style="list-style-type: none"> <li>Mitigates the following issues:                             <ul style="list-style-type: none"> <li>Occasional IO timeout under heavy workloads potentially leading to drive drops</li> </ul> </li> </ul>

Table 10: Solidigm™ DC P3100 (formerly Intel®)

Date	Revision	Description
May 2022	119D	Mitigates security vulnerability (see Solidigm Advisory SOLIDIGM-SA-00563)

Table 11: Solidigm™ DC P4101 (formerly Intel®)

Date	Revision	Description
May 2022	009D	Mitigates security vulnerability (see Solidigm Advisory SOLIDIGM-SA-00563)



## 2 Solidigm Client SSD Products Revision History

Table 12: Solidigm™ P41 Plus

Date	Revision	Description
Sept. 2024	004C	Firmware would postpone info block refresh if there is a shutdown notification from host to prevent data loss in abnormal edge cases of host shutdown events.
Feb. 2023	002C	<ul style="list-style-type: none"> <li>Fixes possible early disablement of DSLC</li> <li>Fixes SMART Health info corruption and NDA that occasionally occur due to unexpected power loss</li> <li>Improves drive power on to ready time during certain rebuild conditions after unexpected power loss</li> <li>Corrects Verify Command missing in NVMe Commands Supported and Effects Log as reported by drive</li> <li>Fixes occasional drive hang experienced during OS imaging process in WinPE environment</li> </ul>

Table 13: Solidigm™ 660p (formerly Intel®)

Date	Revision	Description
May 2022	005C	<ul style="list-style-type: none"> <li>Potential BSOD during Power State Transition</li> <li>Mitigates security vulnerability (see Solidigm Advisory SOLIDIGM-SA-00563)</li> </ul>

Table 14: Solidigm™ 665p (formerly Intel®)

Date	Revision	Description
May 2022	002C	<ul style="list-style-type: none"> <li>Mitigates security vulnerability (see Solidigm Advisory SOLIDIGM-SA-00563)</li> </ul>

Table 15: Solidigm™ 670p (formerly Intel®)

Date	Revision	Description
May 2022	003C	<ul style="list-style-type: none"> <li>Fix to thermal throttling Flow</li> <li>Fix for Null pointers</li> <li>Block SID Fix</li> <li>Mitigates security vulnerability (see Solidigm Advisory SOLIDIGM-SA-00563)</li> </ul>

Table 16: Solidigm™ 760p (formerly Intel®)

Date	Revision	Description
May 2022	006C	<ul style="list-style-type: none"> <li>Mitigates security vulnerability (see Solidigm Advisory SOLIDIGM-SA-00563)</li> </ul>

Table 17: Solidigm™ Pro 7600p (formerly Intel®)

Date	Revision	Description
May 2022	006P	<ul style="list-style-type: none"><li data-bbox="667 359 1432 386">• Mitigates security vulnerability (see Solidigm Advisory SOLIDIGM-SA-00563)</li></ul>

Table 18: Solidigm™ Pro 6000p (formerly Intel®)

Date	Revision	Description
May 2022	132P	<ul style="list-style-type: none"><li data-bbox="667 564 1432 592">• Mitigates security vulnerability (see Solidigm Advisory SOLIDIGM-SA-00563)</li></ul>

### 3 Solidigm Other SSD Products Revision History

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Table 19: Solidigm™ E 6100p (formerly Intel®)

<b>Date</b>	<b>Revision</b>	<b>Description</b>
May 2022	006E	<ul style="list-style-type: none"><li>• Mitigates security vulnerability (see Solidigm Advisory SOLIDIGM-SA-00563)</li></ul>

## 4 List of Solidigm SSD Products

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Please check all supported Solidigm™ SSDs (formerly Intel®) in the following link:

<https://www.solidigm.com/us/en/support-page/product-doc-cert/ka-00099.html>