



# **Intel<sup>®</sup> Memory and Storage Tool (Intel<sup>®</sup> MAS) (GUI)**

**Release Notes**

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***May 2022***

***Software Version 2.0***



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# Revision History

Software Revision	Description	Date
2.0	Changes in revision 2.0 of the Intel® Memory and Storage Tool (Intel® MAS) GUI include: <ul style="list-style-type: none"><li>• New UI for Intel® MAS</li><li>• Removed Intel® NAND Flash Memory only features, more information</li><li>• Firmware Update to E2010603 for Intel® Optane™ P4800X/P4801X Series</li><li>• Firmware Update to E2010603 for Intel® Optane™ 905P/900P Series</li></ul>	May 2022
1.12	Changes in revision 1.12 of the Intel® Memory and Storage Tool (Intel® MAS) GUI include: <ul style="list-style-type: none"><li>• Resolved firmware update for Intel® Optane™ P5800X Series</li><li>• Added namespace overprovisioning support</li><li>• Corrected the capacity calculation displayed in drive info</li></ul>	December 2021
1.10 v.2	Changes in revision 1.11 of the Intel® Memory and Storage Tool (Intel® MAS) GUI include: <ul style="list-style-type: none"><li>• Firmware Update to E2010600 for Intel® Optane™ P4800X/P4801X Series for ESXi*</li><li>• Firmware Update to L0310200 for Intel® Optane™ P5800X Series for ESXi*</li><li>• Firmware Update to 2CV10201 for D7-P5500/P5600 Series</li><li>• Firmware Update to JCV10200 for D7-P5510 Series</li><li>• Firmware Update to ACV10200 for D5-P5316 Series</li><li>• Added support for Windows* 11, Windows Server* 2022, ESXi* 7.0.3, RHEL* 8.3, 8.4, CentOS* 8.3, 8.4</li><li>• Fixed aggregation threshold error message</li><li>• Resolved firmware update for some Intel® Optane™ SSD P4800X/P4801X Series products</li></ul>	October 2021
1.10	<ul style="list-style-type: none"><li>• Firmware Update for Intel® Optane™ SSD P4510, P4511, P4610 and P4618 Series</li></ul>	September 2021
1.9	Changes in revision 1.10 of the Intel® Memory and Storage Tool (Intel® MAS) GUI include: <ul style="list-style-type: none"><li>• Firmware Update for Intel® Optane™ SSD P4800X/P4801X Series for Windows and Linux*</li><li>• Firmware Update for Intel® Optane™ SSD P4510, P4610 and P4618 Series</li><li>• Fixed bug of drive temperature reporting unknown if above 70 degree Celsius</li></ul>	August 2021

1.8	<p>Changes in revision 1.9 of the Intel® Memory and Storage Tool (Intel® MAS) GUI include:</p> <ul style="list-style-type: none"> <li>• Firmware Update for Non-Opal SKUs for P4510, P4610 and P4618 Series to VDV10182</li> <li>• Firmware Update to L0310200 for Intel® Optane™ SSD P5800X Series (400GB, 800GB, 1.6TB). Update for Windows* and Linux* only</li> <li>• Changed text for Firmware Update button</li> </ul>	June 2021
1.7	<p>Changes in revision 1.8 of the Intel® Memory and Storage Tool (Intel® MAS) GUI include:</p> <ul style="list-style-type: none"> <li>• Allow firmware update for Intel Optane Memory H Series products when cache is enabled with Intel® Rapid Storage Technology (Intel® RST) Driver 17.9 and above</li> <li>• Fixed issue of diagnostic scan always performing quick scan</li> <li>• Updated Intel® MAS license</li> </ul>	May 2021
1.6	<p>Changes in revision 1.7 of the Intel® Memory and Storage Tool (Intel® MAS) GUI include:</p> <ul style="list-style-type: none"> <li>• Added ability to show SMART health log pages on non- Intel® SSD</li> <li>• Fix to allow H10 Series to update firmware individually if update is available for one component only</li> <li>• Update performance booster behavior to fully support 670P series</li> <li>• Updated handling of Secure Erase feature with Intel® RST Driver</li> <li>• Show Intel® RAID members in GUI when drives setup as MegaRAID*. Added support for select MegaRAID* adaptors</li> <li>• Fixed issue of scheduled optimize sessions not being removed from Windows* scheduled list</li> <li>• Firmware Update for Intel® Optane™ P4320, P4420 Series to 3DV10131 &amp; P4326 Series to 8DV10561</li> </ul>	April 2021
1.5	<p>Changes in revision 1.6 of the Intel® Memory and Storage Tool (Intel® MAS) GUI include:</p> <ul style="list-style-type: none"> <li>• Fix for security state being incorrectly reported as Opal Activated on Intel® Optane™ SSD 905P.</li> <li>• Display correct "Use Firmware Update Tool" message for applicable drives and firmware when attempting to update firmware.</li> <li>• Fix issue with Optimizer failing after Windows* 20H2 update.</li> <li>• Updated FW version for few products</li> </ul>	February 2021
1.4	<p>Changes in revision 1.5 of the Intel® Memory and Storage Tool (Intel® MAS) GUI include:</p> <ul style="list-style-type: none"> <li>• Removed Intel® SSD Optimizer functionality for Intel® Optane™ technology products (Feature is only supported on Intel® NAND Flash Memory based products)</li> <li>• SMART health log page parser updates</li> <li>• Add missing firmware update for 320 Series</li> <li>• Remove stale update notes in settings section of GUI</li> <li>• Updated Intel® Optane Memory H20 with Solid State Storage product family names</li> <li>• Added missing identify controller fields in support of Intel® SSD 670p Series</li> </ul>	January 2021
1.4	<ul style="list-style-type: none"> <li>• FW information updated for Intel® SSD S3300</li> </ul>	December 2020



1.3	<p>Changes in revision 1.4 of the Intel® Memory and Storage Tool (Intel® MAS) GUI include:</p> <ul style="list-style-type: none"><li>• Only enable system tuner feature for SATA products</li><li>• Fix issue showing enabled firmware update button regardless of firmware status</li><li>• Add missing firmware update for 256 GB 660p Series SKU</li><li>• Additional tweaks for progress and life remaining bar “look and feel”</li><li>• Updated wording for CVE document (see Intel Advisory INTEL-SA-00362)</li></ul>	November 2020
1.2	<p>Changes in revision 1.3 of the Intel® Memory and Storage Tool (Intel® MAS) GUI include:</p> <ul style="list-style-type: none"><li>• Fix Typo in Intel® MAS Secure erase feature and fixed status of secure erase</li><li>• Added firmware (FW) for Intel® Optane™ Memory H10 with Solid State Storage to FW G002-0440</li><li>• SMART attribute description updates</li><li>• Fix issue with Optimizer scheduler showing incorrect last run date</li><li>• Fix issue incorrectly blocking Optimizer on some S4510 Series drives</li><li>• Fix issue incorrectly retrieving identify namespace data on systems with Microsoft* NVMe* driver</li></ul>	October 2020
1.1	<p>Changes in revision 1.2 of the Intel® Memory and Storage Tool (Intel® MAS) GUI include:</p> <ul style="list-style-type: none"><li>• Intel® Optane™ SSD P4800X Series FW update to FW 485 (for ESXi*)</li><li>• Update Intel® SSD D5-P4320 and Intel® SSD D5-P4326 firmware to 3DV10130 and 8DV10560 respectively</li><li>• Fixed incorrect health status</li><li>• Added Health data and value in Resources for each language</li><li>• Fixed alignment of drive list</li><li>• Use Native language names</li><li>• Added “Give feedback” string</li><li>• Fix incorrect health status calculation that caused preemptive health warning</li><li>• Fixed issue of Mansion Beach drive FW update failures from E2010325</li></ul>	August 2020

<p>1.0.5</p>	<p>Changes in revision 1.1 of the Intel® Memory and Storage Tool (Intel® MAS) GUI include:</p> <ul style="list-style-type: none"> <li>• Updated UI presentation and theme</li> <li>• Updated splash screen to approved Intel image</li> <li>• Updated temperature bar as accepted range (maximum is 70°C)</li> <li>• Temperature bar is now a gradient. As temperature reaches maximum bar will increasingly show red color</li> <li>• Updated estimated life remaining to reflect SMART info percentage used field</li> <li>• Updated setting popup window to align with core UI</li> <li>• Fixed BSOD related to performance booster feature</li> <li>• Fixed tool crash with feature dropdown menu</li> <li>• Add ability to copy/past basic drive info in drive summary page</li> <li>• Fix issue with incorrect temperature values reported on non-supported drives</li> <li>• Fix URL link pointing to latest tool download page</li> <li>• This revision adds a firmware update for Intel® Optane™ Memory, Intel® Optane™ SSD 905P/900P, Intel® Optane™ SSD P4800X/P4801X, Intel® SSD D3-S4510/D3-S4610, DC S3100, DC P4101, E 6100p, E 5400s, E 5100s, Pro 7600p, Pro 6000p, Pro 5450s, Pro 5400s, 760p, 660p, and 540s.</li> </ul>	<p>July 2020</p>
<p>2.0</p>	<ul style="list-style-type: none"> <li>• This is the first revision of the Intel® Memory and Storage (Intel® MAS Tool, GUI)</li> <li>• This version of the tool contains both a Graphical User Interface (GUI) and a CLI (Command Line Interface) with the functionality to manage Client and Datacenter Intel® SSD and Intel® Optane™ Memory. See the User Guide for more information.</li> </ul>	<p>April 2020</p>

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



# 1 Intel® Memory and Storage Tool (Intel® MAS) (GUI)

**Table 1-1. List of Intel® Solid State Drives**

Solid State Drive	Latest Firmware Version(s)
Intel® Optane™ SSD P5800X	L0310200
Intel® Optane™ SSD E2010603	E2010600
Intel® Optane™ SSD E2010603	E2010600
Intel® Optane™ SSD E2010603	E2010480
Intel® Optane™ SSD E2010603	E2010480
Intel® Optane™ SSD 800P	K4110440

**Table 1-2. List of Intel® Optane™ Memory Devices**

Memory	Latest Firmware Version(s)
Intel® Optane™ Memory H20	Original Product Release Firmware, No Updates
Intel® Optane™ Memory H10	G002-0440
Intel® Optane™ Memory	K4110440

**Table 1-3. Intel® Optane™ Memory H10 Revision History**

Date	Revision	Description
September 2020	G002-0440	This firmware version has following fixes: <ul style="list-style-type: none"><li>• Complaint with the 10th Generation Intel® Core™ mobile processor Platform</li></ul>



**Table 1-4. Intel® Optane™ SSD 905P/900P Revision History**

Date	Revision	Description
May 2022	E2010603	This firmware version has the following fixes. <ul style="list-style-type: none"> <li>Fix Windows Server* 2022/Windows* 11 certification related I/O test issue</li> </ul>
July 2020	E2010480	This firmware version has the following fixes. <ul style="list-style-type: none"> <li>Fix for drive fails to set correct Native Max LBA when forcing max address capacity to smaller one</li> <li>Fix for media errors + E2E error increments after coming back to the native capacity</li> <li>Fix for drive sometimes fails PCIe* training during reboots resulting in reduced link width or speed</li> <li>Fix Link width degrades during link disable/enable on some platforms</li> <li>Fix for Serial number is all zeroes after U.2 drive hot plug operation</li> <li>Fix for Quality Reliability Test encountered Cold ECC Failure</li> <li>"Mitigates security vulnerability (see Intel Advisory <a href="#">INTEL-SA-00362</a>)"</li> </ul>

**Table 1-5. Intel® Optane™ SSD P4800X/P4801X Revision History**

Date	Revision	Description
May 2022	E2010603	This firmware version has the following fixes. <ul style="list-style-type: none"> <li>Fix Windows Server* 2022/Windows* 11 certification related I/O test issue</li> </ul>
August 2021	Windows*/Linux* - E2010600	Intel® Optane™ SSD P4800X/P4801X updates to firmware E2010600 for Windows*/Linux* (ESXi* version will be released later)
August 2020	Windows*/Linux* - E2010485 ESXi* - E2010485	Intel® Optane™ SSD P4800X Series FW update to FW 485 (for ESXi*)
July 2020	Windows*/Linux* - E2010485 ESXi* - E2010475	Intel® Optane™ SSD P4800X 375 GB AIC SKU now supported for upgrade
May 2020	Windows*/Linux* - E20104851 ESXi* - E20104751	This revision adds the following firmware updates for Intel® Optane™ SSD P4800X/P4801X: <ul style="list-style-type: none"> <li>Windows*/Linux* - E2010485</li> <li>ESXi* - E2010475</li> </ul> <b>Note:</b> 1. P4800X 375 GB AIC SKU with firmware E2010211 will not support upgrade firmware to E2010475 or E2010485, this is targeted for a future release. <ul style="list-style-type: none"> <li>Minor Bug fixes and enhancements</li> </ul>
December 2019	E2010435	The following changes are included in this firmware update: <ul style="list-style-type: none"> <li>QAN 9871</li> </ul>
February 2018	E2010324 (375 GB) EB3B0306 E2010325 (750 GB) EB3B0309	The following changes are included in this firmware update: <ul style="list-style-type: none"> <li>Bug fixes from previous firmware on 375 GB (from FW: E2010320)</li> <li>Note that 750 GB was qualified on firmware E2010325. There is no maintenance release past that FW. Additionally, there is limited applicability of this firmware on qual samples. Reach out to Intel</li> </ul>



		representative if your 750 GB samples are on earlier revision than FW E2010325.
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