

Intel® Rapid Storage Technology (Intel® RST) 20.1.0.1015.1 Release

7 Aug 2024

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Supported Operating Systems

Microsoft Windows 11 x64* 21H2 22H2

Microsoft Windows 10 x64*

Revision History

Date	Driver Revision	Build Number
26 Sep 2023	20.1.0.1002 release	1002
13 Oct 2023	20.1.0.1004.0 release	1004
21 Nov 2023	20.1.0.1004.0 release (PreOS 20.1.0.5743)	1004
15 Dec 2023	20.1.0.1004.0 release (PreOS 20.1.0.5748)	1004
25 Dec 2023	20.1.0.1005.1 release (PreOS 20.1.0.5748)	1005
19 Jan 2024	20.1.0.1005.5 release	1005
19 Mar 2024	20.1.0.1010.1	1010
4 Apr 2024	20.1.0.1011.0	1011
29 Apr 2024	20.1.0.1012.1	1012
28 May 2024	20.1.0.1013.0	1013
9 July 2024	20.1.0.1014.1	1014
7 Aug 2024	20.1.0.1015.1	1015

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Notes:

1. Known Issue is defined as a potential Intel® RST issue that has been replicated internally by the Intel® RST team but has not been root caused to be an Intel® RST defect.
2. The RAID OROM & UEFI version for this release is 20.1.0.5817, the driver and user interface version is 20.1.0.1015.1 and Intel® Optane™ Memory and Storage Management (HSA) driver version 20.0.1016.0. For Intel® RST Premium features (e.g. RAID, Intel® Optane™ memory, CPU Attached Storage), it is recommended that both the Intel® RST pre-OS and Intel® RST OS driver components are updated. Please contact your CE for further details.

Changes Included

Defects Resolved in RST20.1.0.1015.1			
ID	Title	Operation System	Component
14022601356	[ARL-S][N3B][PO]S0ix/PS_ON not working with storage attached on PCH PCIe controllers and mapped under VMD controller	Windows*11	Driver
18036687158	[HSA] PCIe RAID 1 rebuilds with SATA disk after disk failure	Windows*11	Driver
18035488015	[RPL_RPL-S] No popup notification in OS / Event Log entry in case the M.2 RAID1 is degraded	Windows*11	Driver/MW
18039110331	[VMD][REMAP] Remapping Nvme device when VMD is disabled in BIOS should fail and passes	Windows*11	MW/CLI
18038894351	[Mw] Cannot find Rst Mw Service events preseceence	Windows*11	MW

Changes Included

Defects Resolved in RST20.1.0.1014.1			
ID	Title	Operation System	Component
14022041633	EFI Variable with SerialNumber and root port id	Windows*11	PreOS
22019952314	[MTL]RST PreOS HII shows wrong disk size if 4K sector size used	Windows*11	PreOS

18037675727	[HSA][MW][20.1] Suppressing SMART event in HSA ends with error: 0xA00800000	Windows*11	HSA
18030290068	[20.1][MTL-S] Performing VMD Remapping in HSA or using rstcli64.exe does not remap disk on M.2 port J6C1	Windows*11	PreOS/MW
16024477666	[Extended Storage][ARL-HX][RVP2][A2][PCH-B0]SUT Soft hangs while S4 entry with postcode:0004 on SATA RAID10 as primary along with secondary nvmes connected on PXPB /PXPB slots	Windows*11	Driver

Changes Included

Defects Resolved in RST20.1.0.1013.0			
ID	Title	Operation System	Component
16023769928	[ARL-Hx][A2][DPMO]Observed Bugcheck 0xC4 with driver verifier enabled pointing to iaStorVD	Windows*11	Driver
18037671490	[SECURITY][IntegerOverflow] When defining commands DataBufferOffset as negative value commands return code is random	Windows*11	Driver

Changes Included

Defects Resolved in RST20.1.0.1012.1			
ID	Title	Operation System	Component
15013461147	[Dell][RCR] RST HSA to support MSFT CER UX certification	Windows*11	HSA
18036955375	[RCR] Request RST driver to support TRIM command for RAID1 and RAID10	Windows*11	Driver
15015028586	[MSI 15A1][MTL-H] RSTD method is missing, not working	Windows*11	Driver

18036507234	[BSOD][RPL-P][NVMe] DRIVER_POWER_STATE_FAILURE (9f)	Windows*11	Driver
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Changes Included

Defects Resolved in RST20.1.0.1011.0			
ID	Title	Operation System	Component
18037533023	[ARL-S][ARL-Hx][PM][QAC][5 STAR][SV3 OS][26063.1] -SUT doesn't hit LPA - stays at PC2R	Windows*11	Driver

Changes Included

Defects Resolved in RST20.1.0.1010			
ID	Title	Operation System	Component
13011286271	[20.1][MTL-S] PCH drives with disabled VMD remapping are not visible in HSA or rstcli64.exe	Windows*11	Driver
18035020345	In case of a degraded RAID1 no notification mail is sent RST Driver	Windows*11	Driver
15014513509	[Dell Odin MTL-H DVT2.1_ iDV_Issue] System BSOD 0x154 (UNEXPECTED_STORE_EXCEPTION) during MS cycle test	Windows*11	Driver

Changes Included

Features change In PreOS 20.1.0.5785 – Release			
ID	Title	Operating System	Component
14021629743	[LMC] Intel® Rapid Storage Technology 20.1.0.1009	Windows*11	PreOS
18035163644	Missing version information in EFI files.	Windows*11	PreOS

Changes Included

Resolved Issues In 20.1.0.1002 – Release			
ID	Title	Operating System	Component
18029701749	[PreOS] Hang on 10b4/109C after remap drives under VMD and Restart	Windows*11	PreOS

Terminology

Common Terms and Acronyms	Definition
AEN	Asynchronous Event Notification
AHCI	Advanced Host Controller Interface
ATA	Advanced Technology Attachment
ATAPI	Advanced Technology Attachment Packet Interface
BIOS	Basic Input / Output System
BUS PROTOCOL GROUP	A bus protocol group represents a set of bus protocols with similar performance characteristics. Bus Protocol Groups are listed here in descending order of speed: 1- PCIe* 2- SATA
Chipset	A term used to define a collection of The PNHCI components required to make a PC function.
CSMI	OEM Common Storage Management Interface for reporting RAID configurations and SMP, SSP, STP pass through.
DEVSLP	Serial ATA Device Sleep
DMA	Direct Memory Access
DOS	Disk Operating System
DIPM	Device Initiated Power Management
Disk's Write Cache	A memory device within a hard drive, which is allocated for the temporary storage of data before that data is copied to its permanent storage location.
GB	Giga-byte = 1024 ³ bytes
HDD	Hard Disk Drive
HIPM	Host Initiated Power Management
Hot Plug	A term used to describe the removal or insertion of a SATA disk while the system is powered on.

Common Terms and Acronyms	Definition
HSA	Hardware Supported App
ICH	Input / Output Controller Hub
InstantGo*	Microsoft Windows* 8.1 connected standby low-power state that features extremely low power consumption while maintaining Internet connectivity.
KB	Kilo-byte = 1024bytes
LPM	Link Power Management
M.2	Specification for internally mounted computer expansion cards and associated connectors. It replaces the mSATA standard. Formerly known as the Next Generation Form Factor (NGFF)
MB	Mega-bytes = 1024 ² bytes
MEMORY GROUP	A memory group represents a set of backend storage media types with similar performance characteristics. Memory Groups are listed here in ascending order of speed: 1- Spindle Device (HDD) 2- NAND Spindle Hybrid Device 3- PCH SATA NAND Device (SSD) 4- PCIe* NAND Device (SSD) 5- PCIe* NAND Device (SXP)
mSATA	Computer bus interface that connects host bus adapters to mass storage devices such as hard disk drives and optical drives. Uses PCI Express Mini Card-like connector that is electrically SATA.
NAI	Notification Area Icon
NTFS	NT File System
NVC	Non-Volatile Cache
NVMe*	Non-Volatile Memory Express: Non-Volatile Memory Host Controller Interface Specification (NVMHCI), is a specification for accessing solid-state drives (SSDs) attached through the PCI Express (PCIe*) bus
OEM	Original Equipment Manufacturer
ODD	Optical Disk Drive
OROM	Option ROM
OS	Operating System
PCH	Platform Controller Hub
PCIe*	PCI Express (Peripheral Component Interconnect Express): is a high-speed serial computer expansion bus standard
Port	The point at which a SATA drive physically connects to the SATA controller.
PRD	Product Requirements Document
PUIS	Power Up In Standby - Drive feature that allows a spindle device to be powered up in standby mode without spinning the disk up.
RAID	Redundant Array of Independent Disks Matrix RAID: A configuration supporting two RAID levels by having two volumes in a single RAID array that use Intel® RST
RTD3	Runtime D3
RS2	Redstone2

Common Terms and Acronyms	Definition
SATA	Serial ATA
SIPM	Software Initiated Power Management
S.M.A.R.T.	Self-Monitoring, Analysis and Reporting Technology: an open standard for developing hard drives and software systems that automatically monitors a hard drive's health and reports potential problems.
SED	Self-Encrypting Drive
SRT	Intel® Smart Response Technology. Intel® RST's premium feature to use caching technology that enables caching of a device or volume using a faster device
SSD	Solid State Drive – non volatile memory used as storage media
SSHD	Solid-State Hybrid Drive
TB	Tera-byte = 1024 ⁴ bytes
UEFI	UEFI pre-OS driver
UI	User Interface
VC	Validation Candidate
ZPODD	Zero Power Optical Disk Drive