

Intel® Rapid Storage Technology (Intel® RST) 20.2.1.1016.3 Release

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Supported Operating Systems

Microsoft Windows 11 x64* 22H2

Revision History

Date	Driver Revision	Build Number
21 May 2024	20.2.0.1001.1 release	1001
14 June 2024	20.2.0.1003.0 release	1003
29 July 2024	20.2.0.1007.0 release	1007
20 Aug 2024	20.2.0.1010.0 release	1010
11 Sep 2024	20.2.0.1012.0 release	1012
16 Oct 2024	20.2.0.1014.2 release	1014
21 Nov 2024	20.2.1.1016.3 release	1016

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 20.1.0.5850, the driver and user interface version is 20.2.0.1016.3 and Intel® Rapid Storage Technology (Intel® RST) (HSA) driver version 20.0.1019.0. 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.

Features Change

Implemented Driver Features in 20.2.1.1016.3			
ID	Title	Operating System	Component
15016661550	RAID1 and RAID5 changed to "Failed" state after unplug one RAID member during file copy to RAID volume	Windows*11	Driver

Features Change

Implemented Driver Features in 20.2.0.1014.2			
ID	Title	Operating System	Component
13011765882	DLRM shall be enabled by default on AC and DC	Windows*11	Driver
18039532919	DLRM update up/down time windows	Windows*11	Driver
18039440260	[HSA] Rebuild Volume with another disks throws error 0xA0060024	Windows*11	Driver
18039520387	[DLRM][CLI][MW] Add DLRM diagnostic ICOTLs	Windows*11	MW
18039901787	[20.2] Add platform name information in DIDs of iastorvd.inf	Windows*11	Driver
18040105812	RST PreOS to disable Memory Space and Bus Master bits for all devices managed by VMD controller.	Windows*11	Driver

Features Change

Implemented Driver Features in 20.2.0.1012			
ID	Title	Operating System	Component
13011765882	DLRM shall be enabled by default on AC and DC	Windows*11	Driver
18039532919	DLRM update up/down time windows	Windows*11	Driver
18039440260	[HSA] Rebuild Volume with another disks throws error 0xA0060024	Windows*11	Driver
18039520387	[DLRM][CLI][MW] Add DLRM diagnostic ICOTLs	Windows*11	MW

Features Change

Implemented Driver Features in 20.2.0.1010			
ID	Title	Operating System	Component
18039208869	[DLRM][CLI] Add DLRM status support for CLI	Windows*11	CLI
18039113265	[EWDK] Update all projects to EWDK 26100	Windows*11	Driver
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	[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

Features Change

Implemented Driver Features in 20.2.0.1009			
ID	Title	Operating System	Component
	[HSA][MW][20.1] Suppressing SMART event in HSA ends with error: 0xA00800000	Windows*11	HSA
18039109852	[DLRM] Add registry key DLRMForceEnable to enable DLRM on AC also.	Windows*11	Driver
18038939495	Fix issue with RND4KQ1 read/write performance	Windows*11	Driver
18039079898	[DLRM] Done main processing on one thread only.	Windows*11	Driver
22019952314	[MTL]RST PreOS HII shows wrong disk size if 4K sector size used		PreOS
22019914117	VMD on ARL-S Refresh		PreOS
14022041633	EFI Variable with SerialNumber and root port id		PreOS

Features Change

Implemented Driver Features in 20.2.0.1007			
ID	Title	Operating System	Component
18038631998	[DLRM][HSA] Add DLRM status support for HSA	Windows*11	MW/HSA
13011765882	IOCTL for getting Link info	Windows*11	Driver
13011765882	Pause DLRM during boot when on AC	Windows*11	Driver
13011765882	Add IOPS logic to DLRM	Windows*11	Driver
13011765882	Add IOCTL to get DLRM status	Windows*11	Driver

Features Change

Implemented Driver Features in 20.2.0.1003			
ID	Title	Operating System	Component
13011765882	IOCTL for getting DLRM status.	Windows*11	Driver
18038541196	Survivability IOCTL implementation.	Windows*11	Driver

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

Common Terms and Acronyms	Definition
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.
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

Common Terms and Acronyms	Definition
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
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*bytes
UEFI	UEFI pre-OS driver
UI	User Interface
VC	Validation Candidate
ZPODD	Zero Power Optical Disk Drive