Intel® Rapid Storage Technology 15.2.0.1020 Production Version Release

22 September 2016

Supported Operating Systems

Platform Support		OS Version
7th Generation core CPU	Skylake CPU	
N	Y	*Microsoft Windows 7**
N	Y	*Microsoft Windows 7 x64 Edition**
N	Y	*Microsoft Windows 8.1*[1]*
N	Y	*Microsoft Windows 8.1 x64 Edition**
Y	Y	*Microsoft Windows Server 2012 R2 x64 Edition**
Y	Y	*Microsoft Windows 10* [1]*
Y	Y	*Microsoft Windows 10 x64 Edition**
Y	Y	*Microsoft Windows 10 TH2* [1]*
Y	Y	*Microsoft Windows 10 TH2 x64 Edition**
Y	Y	*Microsoft Windows 10 Redstone1**

1 - These OS versions pass validation testing, but are not WHQL certified.

Revision History

Date	Driver Revision	Build Number
22 September 2016	15.2.0.1020 PV Release	1020
16 September 2016	15.2.0.1020 PC Release	1020
24 June 2016	15.2.0.1008 Beta Release	1008
2 June 2016	15.2.0.1004 Release	1004
15 April 2016	15.1.0.1016 Alpha Release	1016
8 April 2016	15.1.0.1014	1014

Notes:

1. Known Issue is defined as a potential RST issue that has been replicated internally by the Rapid Storage Technology team but has not been root caused to be an RST defect.

2. 15.1 version is renamed to 15.2 version for internal logistic purposes. RST 15.1 version will no longer be used.

3. This build has been validated on and supports Windows 10 RS1.

4. The RAID OROM & UEFI version for this release is 15.2.0.2754, the driver and user interface version is 15.2.0.1020. For RAID configurations, it is recommended that both the pre-OS and RST OS driver components are updated. Please contact your CE for further details.

5. No RST support for PCIe storage devices in AHCI mode.

Supported Hardware

Chipset Name	Platform	SKU Details	
Intel® 7th Generation Core Processor Platforms			
Intel® 7th Generation Core Processor Family Platform I/O SATA AHCI/RAID Controller	Intel® 7th Generation Core Processor Mobile LP **SPT** PCH-LP (Mobile-LP)	• **Base-U (A)** • Premium-U	
Skylake Platforms (N – 1)			
Intel® 100/C230 Series Chipset Family	Skylake SPT PCH-H (Desktop/WS)	• **H110 (A)** • **Q150 (A)** • **B150 (A)** • Z170	• H170 • Q170 • C236
Intel® 100/C230 Series Chipset Family	Skylake SPT PCH-H (Mobile/Mobile WS)	• HM170 • QM170 • CM236	

Intel® 6th Generation Core Processor Family Platform I/O SATA AHCI/RAID Controller	Skylake SPT PCH-LP (Mobile)	• **Base-U (A)** • Premium-U • Premium-Y

A – Does not support RAID
H – HEDT SKU

Resolved Issues

Resolved Issues in 15.2.0.1020 PV Release		
Reference No	**Description**	**Affected OS's**
1304649417	Crash dump is not generated on raid configurations	windows.10_rs1.x64
1804345567	SLP_S0 residency is sporadically poor on samples	windows.10_rs1.x64
1804297007	System - PNP (disable and enable) with IO Before and After (Reliability)" failed.	windows.10_th.x64
1804333817	'Flexible data protection (Recovery)' is not available when the secondary hard drive is the same size as the primary hard drive.	All OS
1405255592	Glitch in camera video feed when access to USB simultaneously with SRT background traffic	windows.10_rs1.x64
1804340898	Hang after power off cache disk	All OS
1804297003	BSOD 0xF4 when run restart only test on win7OS.	windows.7.x64
1804333718	Create option missing from RST UI in discrete graphics legacy boot mode with RAID enabled.	windows.7.x64
1804338631	Intel RST 15.0.0.1039 UI displays Windows 10 version and build number different from msinfo	windows.10_th.x64, windows.10_rs1.x64
1804335800	RST Bugcheck A0 during stress test when resuming from hibernate	windows.10_rs1.x64
1804327407	Windows 10 is not listed as a supported OS in the Readme File Information for IRST	windows.10_th.x64
1804327868	BSOD when performing S4 right after creating RAID volume with OS	windows_10_x64
1804306938	M.2 SSD also show SMART risk event when a SMART HDD is connected	

1804327229	Error message when user try to import DevSlp registry keys	windows.10_rs1.x64
1804324647	Platform hangs during enter into S3/S4 with remapping	windows.10_rs1.x64
1804315575	The new ZPODD tool version is still not changed (1.0.0.1003) after installed ZPODD tool v15.0	All OS
1804322496	iRST will disappear from Control Panel after repair with different install kit	windows_10_th_desktop_x64

Resolved Issues in 15.2.0.1008 Beta Version

Reference No	Description	Affected OS's
1804299849	Link Power Management state is disabled when RST driver is installed	windows_10_x64
1804279647	There is BSOD under S3/S4 stress test overnight	other
1804302853	USB KB/MS lose function when installing Win7 on RAID mode NVME SSD	windows_7_x64
1804302745	System shows blue screen after installing iRST driver on QS sample	All OS

Resolved Issues in 15.2.0.1004 Version

Reference No	Description	Affected OS's
1804293895	RST driver cannot be installed, because 7TH GENERATION SATA AHCI DID is wrong	windows_10_th_desktop_x64
1804295141	Inf has been updated to reflect the platform supported sku's	All OS
1804279720	Devslp function doesn't work with certain SSD's.	windows_8_x64
1804279858	ZPODD tool shows error message "No Zero Power ODD or intel RST driver found"	windows_8.1_x32
1804279657	CSMI_SAS_PHY_INFO cannot be obtained on some kind of chipset	windows_7_x64, windows_8.1_x64
1804279783	System occurred BSOD (0XA0) when the first time enter S4 after create recovery volume in RSTUI.	windows_7_x64
1804279750	S3 resume ODD lost issue	windows_7_x64, windows_7_x32
1804279815	Long time to sleep or resume (S3/S4) from system with IRST v14.8.1.1043.	Windows 10-64

Resolved Issues in 15.1.0.1016 Alpha Version

Reference No	Description	Affected OS's
4939311	Additional 7TH GENERATION platform SKU support added	Windows 10-64

Resolved Issues in 15.1.0.1014

Reference No	Description	Affected OS's
4938767	Issue with HDD returning to maximum performance level when resuming from CS.	Windows 10-64
4938838	RST does not process some HPA security commands.	Windows 10 – 64
4938874	System will hang after finishing disk schedule error checking.	Windows 7-64
4938911	NVMe APST registry function fails with S3/S4 resume.	Windows 10 – 64
4938497	No performance improvement after PCIe remapping enabled.	Windows 8.1-64
4938904	Power consumption increased with certain platform configurations.	Windows 10 – 64
4939144	BSOD xEF while running S3 testing.	Windows 10-64
4938799	Link power management in UI doesn't change the registry values after deleting RAID 1 or 0	Windows 10 - 64
4937068	ROHI: SMART Event disk rebuilding after system reboot of successful Raid 1 creation	Win7-64,Windows 8 - 64,Windows 8 - 64
4938308	RST un-installer doesn't recover original Windows register settings which can have OS performance impact	Windows 10-64
4938720	Special characters during creating volume inside Name text box are accepted but should not be.	Win7-64,Windows 8 - 64
4938976	Some NVMe devices hang when sending pass through command	Win7-64,Windows 10-64, Windows 8 - 64
4938782	Cannot unlock hard drive after creating RAID	Windows 8 - 64
4938766	Cannot delete RRT (Recovery) volume when RTD3 is enabled in BIOS	Windows 10-64
4938754	UI shows unknown port for cache disk after accelerating disk with remapped disk	Windows 10 - 64

Known Issues

Known Issues in 15.2.0.1020 PV Version		
Reference No	**Description**	**Affected OS's**
1804342367	There is a black screen on S4 stress test	windows.10_th.x64, windows.7.x64
1804342366	OS does not run smoothly during about one minute after resume from s3.	windows.10_th.x64
1804340991	Keyboard loses function at the "Ctrl+I" menu in RAID mode after touch the touchpad	windows.10_rs1.x64
1804340990	Cannot use left/right arrow in RAID menu (Ctrl I) after we idle test unit more than one minute.	windows.7.x64
1804340981	The "Ctrl+I" menu will hang when trying to choose some options via "up" between "down" key for a short period of time in RAID mode.	All OS
1804339843	System has BSOD 0XEF issue when playing video and running" HDD copy and compare" at the same time.	windows.10_rs1.x64
1804339839	System will auto enable "write-caching" after S3/S4/CB resume only on NVMe SSD	windows.10_rs2.x64
1804338638	When enter SLP_S0, the SSD power consumption is too high - more than 20mW.	windows.10_th.x64
1804338633	System get SCT fail under RAID mode.	windows.10_rs1.x64
1804338632	"Zero Power ODD Tool" cannot be installed normally on Win8.1 if QFE - KB3126593 is installed.	windows.8_1.x64
1804338258	It takes more than 30 sec to send command to NVMe device after it enters D3	windows.10_th.x64
1804334481	When secure boot is on the SUT will boot into OS and create some error logs.	All OS
1804333726	SUT will hang on Logo when change slot with NVMe SSD	All OS
1804329218	System Run 3D mark11 Got low performance issue with IRST installed.	windows.10_th.x64
1804327901	RAID1 system will hang, when one of the HDDs is removed from the RAID volume.	windows.10_th.x64
1804325216	BSOD or Lost disk during S4 on 2 remapped disks with RAID0/RAID1 and in nonRAID status	windows.10_rs2.x64
1804315591	There is BSOD on DS3 aging overnight.	windows.10_th.x64

1804279831	The benchmark result of RAID1 and RAID5 are too low	other
1804280021	SRT not correctly created when doing system restart immediately after enabling acceleration	windows_10_th_desktop_x64
1804279982	Disk was removed from RRT volume after clicked "Access recovery disk files"	windows_10_th_desktop_x64, windows_8.1_x64
1804279979	After using all disk in logical volumes then clicking create, IAStroUI has stopped working appears on the screen	windows_8_x64
1804279952	After Encrypting OS on Nvme device, it becomes Inaccessible after 3 Hibernations or 3 Restarts	windows_10_th_desktop_x64

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 decending 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.
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 = 1024^2bytes
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) 4- PCIe NAND Device (SSD) 2- NAND Spindle Hybrid Device 5- PCIe NAND Device (SXP) 3- PCH SATA NAND Device (SSD)
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
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	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 = 1024^4bytes
UEFI	UEFI pre-OS driver
UI	User Interface
ZPODD	Zero Power Optical Disk Drive