Intel® Turbo Memory

Release Notes

October 2008

Revision 1.8.0.1018

Revision History

Revision History

Package Definition	Intel® Turbo Memory Driver Revision	Intel® Matrix Storage Manager Driver Revision	Release Date
1.8 PV	1.8.0.1018	8.6.0.1007	October 24, 2008
1.7 PV	1.7.0.1029	8.5.0.1032	July 30, 2008
1.6.1 PV	1.6.1.1004	8.1.0.1001	May 16, 2008
1.6 PV	1.6.0.1034	8.0.0.1039	May 2, 2008
1.5 PV	1.5.0.1013	7.8.0.1012	October 19, 2007
1.1 PV	1.1.0.1010	7.0.1.1001	July 24, 2007
1.0 PV	1.0.0.1082	7.0.0.1020	March 13, 2007

Supported Operating Systems:

- Microsoft Windows Vista* x32 Edition (RTM Version)
- Microsoft Windows Vista* x64 Edition (RTM Version)

Supported Hardware:

- Intel® 4 Series Chipset based platforms supporting AHCI or RAID mode and using 2GB/4GB Intel® Turbo Memory modules
- Mobile Intel® 4 Series Express Chipset based platforms supporting AHCI or RAID mode and using 2GB/4GB Intel® Turbo Memory modules
- Intel® 3 Series Express Chipset based platforms supporting AHCI or RAID Mode and using 1GB Intel® Turbo Memory modules
- Mobile Intel® 965 Express Chipset based platforms supporting AHCI mode and using 1GB Intel® Turbo Memory modules

New Features

Feature	Description
4GB support	Added support for 4GB Intel® Turbo Memory modules on Intel® 4 Series Chipsets and Mobile Intel® 4 Series Express Chipsets supporting AHCI or RAID mode

RAID support for 2GB	Added support for RAID mode for 2GB Intel® Turbo Memory modules on Intel® 4 Series Chipsets and Mobile Intel® 4 Series Express Chipsets
User pinning	Allows end-user applications to be pinned in flash; the contents are retained across S4, S5, and other system states

Issues - Fixed in this release

Reference No:	Description
N/A	Please see the Intel® Matrix Storage Manager Release Notes for a description of the supported driver fixes.
N/A	On a system configured in RAID mode, there is a required change to the BIOS to support the "cache flush" command. Please see the 1.8 BIOS Writers Guide for more details on implementation.
2807629	Corrected behavior that caused the "intel_robson has stopped working" message to appear
2807674	User Pinning Dashboard percentage out of sync with system tray icon
2807676	Graphic display issues when opening a minimized Dashboard via system tray icon
2742369	OROM Interrupt 13h cannot cross segment boundary
2787832	User Pinning Dashboard fails when not installed on C drive
2787875	Unhandled exception error being thrown upon start of Dashboard
2788005	Dashboard takes long time to initialize when connected to test networks
2742874	Progress bar missing when exporting profiles
2558756	Incorrect version number in Intel® Turbo Memory Console splash and About screens
2559226	RAID image will not boot if Intel® Turbo Memory card is installed with another PCI HW device on desktop
2561280	Pinning Service does not start when executable is signed
2742626	Multiple installations can occur with unpacked installer
2561179	Dashboard UI does not properly maximize or minimize
2561325	0xD1 blue screen observed when board encounters excessive ECC errors
2742333	Incorrect profile selected after closing and re-launching Dashboard
2742673	Copyright details need updating
2561687	OROM hang after power fail on RAID
2807664	Cache leak when dashboard opened while still pinning
2807820	Cache leak after unpinning large files
2807745	Unable to pin files from secondary volume on primary disk
2788253	0xB8 blue screen when system was in idle state and during S3/S4 cycling
2788005	User Pinning Dashboard startup slows for profiles with large number of files

Reference No:	Description

Issues - Fixed in the previous releases

Reference No:	Description
2560390	GUI shows Microsoft Windows ReadyBoost* and Microsoft Windows ReadyDrive* status as UNKNOWN
2560398	Intel® Matrix Storage Manager driver in RAID mode crashes on reboot cycling
2558892	E-SATA drive power management test causes blue screen
2558949	Windows ReadyBoost is sporadically disabled after automated installation
2560250	0xE4 blue screen observed when running S3/S4 cyclic testing
2560518	0xE4 blue screen observed when running S3/S4 cyclic testing
2195901	Intel® Turbo Memory driver currently does not pass the WDK Power Performance Test
2443768	A drive letter is sometimes assigned to the NVCACHE volume.
2553400	Unknown window seen when opening the System Information Window
2553955	Sporadic blue screen observed when drive letter is manually assigned to the NVCACHE volume
2554191	When a driver letter is manually assigned to the NVCACHE volume, the drive letter is sporadically missing after a power fail followed by a reboot
2554235	The installer displays a false popup message while installing the Intel® Turbo Memory driver
2557086	Sporadic blue screen seen upon reboot after a power fail had occurred while the hard drive is spun down
2557177	Kit installed shows up incorrectly in Japanese OS
2557754	Intel® Turbo Memory option ROM incorrectly identifies dual-boot setups
2558883	Windows Vista SP1 occasionally reports Windows ReadyBoost as disabled
2561284	0x0A BSOD observed during DC testing of S3 and S4
2561356	System hang observed during S3 with RAID0 and RAID1 volumes
2561357	System hang observed during S4 with RAID0 and RAID1 volumes
2561359	System hang observed during S5 with RAID0 and RAID1 volumes

Reference No:	Description
2742285	0x8086 blue screen observed during S4 cycling on RAID1 volumes
2742316	0xD1 blue screen observed during S5 cycling on RAID0 volumes
2742332	0xE4 blue screen observed during mixed S3/S4 cycling on RAID1 volumes
2561576	Incorrect wording during DEU install process
2742653	Option ROM hang after power-fail scenario on RAID
2211046	Resume from S4 takes longer with Intel(R) Turbo Memory than without; the delay is anywhere between 1 to 3 seconds
2257120	The console has inconsistent font when installed in Japanese
2553992	Windows ReadyBoost checkbox is overlapped in the UI in some languages (CHS, CHT, JPN, KOR)
2553535	System hangs when entering S3 with RAID enabled
2555934	Intel® Turbo Memory Console fails to launch system information in RAID mode
2559200	Windows ReadyDrive disabled after power fail
2559751	Windows ReadyDrive not functioning correctly in RAID configuration
2558344	0xD1 blue screen observed on reboot cycling.
2557086	Sporadic blue screen seen upon reboot after a power fail occurs while the hard drive is spun down.
2554191	When a driver letter is manually assigned to the NVCACHE volume, the drive letter is sporadically missing after a power fail followed by a reboot.
2554235	The installer displays a false popup message while installing the Intel® Turbo Memory Driver.
2553400	Unknown window seen when opening the System Information Window.
2553537	Blue screen observed when executing SDStress tests.
2553955	Sporadic blue screen observed when drive letter is manually assigned to the NVCACHE volume.
2443768	A drive letter is sometimes assigned to the NVCACHE volume.
2517403	Control Panel Add/Remove string is not right to left in Arabic.
2558883	Microsoft Windows Vista SP1 occasionally reports Microsoft Windows ReadyBoost* as disabled.
2557754	Intel® Turbo Memory OROM incorrectly identifies dual-boot setups.
2555382	Intel® Turbo Memory Console does not show Intel Turbo Memory values when Windows User Account Control is disabled.
2557848	Intel® Turbo Memory Console incorrectly shows Microsoft Windows ReadyBoost as disabled.
2558699	OROM power fail message sporadically not seen after power fail.
2557124	Blue screen while running Plug and Play driver tests
2257122	For Japanese, Chinese Simplified, and Chinese Traditional languages, in the Intel(R) Turbo Memory Console System Information, the ™ and ® characters are corrupted.

Reference No:	Description
2290701	Console showing junk values in System Information for the hard drive "Model Name" and "Capacity" when Intel(R) Turbo Memory is loaded but the Intel(R) Matrix Storage Manager is not.
2333491	For Japanese, Chinese Simplified, and Chinese Traditional languages, the Report.txt generated by console will show the ® character as corrupted in the section of the report that is in English.
2438081	Unchecking the Microsoft Windows ReadyDrive* checkbox in the console does not fully disable the Windows ReadyDrive feature.
2442584	8086 (301,6A,A,x) blue screen seen at a very sporadic rate during restart testing.
2517406	Error message popup is seen instead of Help Menu when the help menu is evoked in unsupported languages.
2517425	Copyright symbol is corrupted when English UI is displayed in Thai operating system.
2550957	Sporadic blue screens have been observed during S4 cycling testing.
2551633	The DFOROM uses up to 16KB of system memory below EBDA during OROM initialization.
2552984	System hangs at the OROM power failure message.
2553023	Windows ReadyDrive option is greyed out after unchecking it in GUI, rebooting the system, then re-opening the GUI.
2553538	"Enabling write caching" policy is disabled after first iteration of S3 (Standby) and S4 (Hibernate).
2553993	Report.txt file does not contain all expected information when "Save System Information" Tab is clicked in UI.
2554237	Sporadic disk integrity issues may be observed on power-fail while in DC mode.
2554571	OS gets corrupted or performs continuous reboot occasionally after OS loading screen under power fail scenario.
2556287	0xD1 blue screen seen when restarting after an installation of the driver package.

Issues – Known in this release

Reference No:	Description
N/A	On a system configured in RAID mode, there exists a condition where NV Cache commands will not be sent to the Windows ReadyDrive cache provided by Intel® Turbo Memory. Microsoft* has released a Knowledge Base article and QFE that address this issue. (http://support.microsoft.com/kb/954943). Intel is

Reference No:	Description
	recommending that customers who encounter this issue directly contact Microsoft to obtain the QFE.
N/A	Standby and Resume issues have been seen on SATA Ports where an ACPI _PS3 method to power down a given hard drive is defined and the hard drive is being cached by Intel® Turbo Memory.
N/A	A few I/Os take significantly longer than majority of the other I/Os. This can result in larger than expected variances on some performance tests, and also non-representative averages due to the outliers.
N/A	Sporadic 8086 (0, 0, 0, 0) blue screens seen with some hard drives.
2438311	Windows ReadyBoost will be reported as enabled in the console when a USB thumb drive is connected and Windows ReadyBoost is enabled on the thumb drive.
2555307	Language is shown as "None selected" in the System Information window.
2555382	Intel® Turbo Memory Console does not show Intel Turbo Memory values when Windows User Account Control is disabled
2662546	System hangs during boot process
2559226	RAID image will not boot if Intel Turbo Memory is installed with another PCI HW device on desktop
2560019	App Pinning profile size shown in drop down menu is incorrect
2687963	0xA blue screen observed when entering S3 with RAID enabled
2687964	During S4 resume, Windows Error Recovery screen pops up with RAID enabled
2561255	Visualizer is not properly updated after unpinning a large application
2742257	User Pinning Dashboard not responsive during large cache changes
2742289	Applications/Custom-file sets missing from pinned file list
2742578	Dashboard Help needs to be updated
2807627	When changing user pinning profiles, the Dashboard appears dead
2808144	Dashboard cuts visual file size in Japanese operating system
2808030	Pinning from above 1 TB boundary on drive may pin wrong LBA
2807691	When pinning a file set whose files are not on the hard drive, the pinning operation hangs
2855339	Pinned cache lines sometimes don't get updated after power fail
2788235	Dashboard switches from current profile to first profile after power fail
2807604	Cannot open Dashboard while pinning is in progress
2554771	Power fail while pinning large files may delete the profile from the Dashboard