

ENGINEERING RELEASE NOTES
S3® Savage4™ Win2000 RC3/RTM Driver 5.12.01.8000-8.30.15
01/14/2000

Recipient

S3

Purpose

The purpose of this release is to fix failures reported by the DVD99 test tool.

Products Supported

Savage4™, revisions C and D

Language Support

English (US)

Software Requirements

Microsoft Windows2000 RC3 and later. These versions of Win2000 provide DX7 support, and disable DX6 support.

Driver/Application/Utility Components

The driver components that would comprise the contents of an installation disk are:

- S3SAVG4.INF
- S3SAVG4.CAT
- S3SAVG4M.SYS
- S3SAVG4.DLL
- S3MICD.DLL

The application components included on the installation disk are:

- S3Gamma
- S3Swth2

Resolutions Supported

This driver uses dynamic mode table support when its device is the primary display adapter. In that case, it uses the mode table reported by the BIOS and prunes out only certain modes as needed. If the adapter is the secondary adapter in a MultiMonitor configuration, however, it is not allowed to make BIOS calls. In that case, it uses hard coded mode tables and BIOS-simulation functions.

Resolutions Supported – Device is Primary

In this configuration, refer to the BIOS release letter for the mode list. The driver will get the list from the BIOS, so that is the starting point for the modelist.

The driver will, however, deliberately block the following modes, even if supported in the BIOS:

- Any resolution not in the set of:
 - Direct Draw Modes: 320x200, 320x240, 400x300, 512x384, 640x400
 - Desktop Modes: 640x480, 800x600, 1024x768, 1152x864, 1280x1024, 1600x1200, 1920x1440.
- Note that this driver does not support the DVD resolutions: 720x480, 720x576.
- Any desktop resolution whose color depth is not in the set of: 8, 16, 32.
- If TV is the only display active, the following modes are pruned: 320x200, 320x240, 400x300, 512x384, and any resolution larger than 640x480 if NTSC-TV or 800x600 if NTSC-PAL.
- 1280x1024 is pruned if the color depth is 32bpp and the refresh rate is greater than 75.
- Prune 1600x1200 if 16bpp and refresh rate exceeds 75 Hz.
- Prune 1600x1200 if 32bpp and it's a Savage4 and the refresh rate exceeds 60 Hz.
- The driver prunes all interlaced modes (refresh rate is 43 interlaced or 48 interlaced).
- If a flat panel is active, the driver will prune any desktop resolution that exceeds the dimensions of the fixed resolution flat panel device (in height, width, or both).
- If a flat panel is active, the driver prunes all resolutions other than 60 Hz.

Resolutions Supported – Device is Secondary

In this configuration, the driver hardcodes support for a specific set of graphics modes. The driver makes no BIOS calls. Currently it only supports following modes and refresh rates:

Mode list is same as Primary adapter except that it doesn't support refresh rates higher than 85hz.

The driver will, however, deliberately block the following modes, even if supported in the BIOS:

- Any resolution not in the set of:
 - Direct Draw Modes: 320x200, 320x240, 400x300, 512x384, 640x400
 - Desktop Modes: 640x480, 800x600, 1024x768, 1152x864, 1280x1024, 1600x1200, 1920x1440.
 - Note that this driver does not support the DVD resolutions: 720x480, 720x576
- Any desktop resolution whose color depth is not in the set of: 8, 16, 32
- If TV is the only display active, the following modes are pruned: 320x200, 320x240, 400x300, 512x384, and any resolution larger than 640x480 if NTSC-TV or 800x600 if NTSC-PAL.
- 1280x1024 is pruned if the color depth is 32bpp and the refresh rate is greater than 75.
- Prune 1600x1200 if 16bpp and refresh rate exceeds 75 Hz.
- Prune 1600x1200 if 32bpp and it's a Savage4 and the refresh rate exceeds 60 Hz.
- The driver prunes all interlaced modes (refresh rate is 43 interlaced or 48 interlaced).
- If a flat panel is active, the driver will prune any desktop resolution that exceeds the dimensions of the fixed resolution flat panel device (in height, width, or both).
- If a flat panel is active, the driver prunes all resolutions other than 60 Hz.

Installation Instructions

- Use the standard method for installing Windows2000 display drivers: use the Device Manager to uninstall all display devices and reboot to let PNP installation find the S3 adapter

and driver or install from Update Drivers page off SystemProperties\Hardware\
DeviceManager\DisplayAdapters\DriverName.

- If the O.S. under test already has an in-the-box Savage4 driver, and you want to replace that with this one (an unsigned driver), you may not want to use a PNP installation. You may instead use the Update Driver method instead. Once you've selected Update Driver from the Display Properties Settings page, you will see the Upgrade Device Driver Wizard begin. In answer to the Wizard query What do you want the wizard to do? choose Display a list of the known drivers for this device so that I can choose a specific driver. From the next window, Choose Have Disk... and continue from there.

Known Limitations or Issues

- Palettized textures are not supported.
- This driver does not support DirectX 6.0. Win2000 RC2 turns off DX6 support, so the driver does as well. Because it has DX7 support only, this driver is not intended for Win2000 releases prior to RC2 (i.e. use only on Win2000 builds greater than RC1, 2072).
- The driver does not support the DVD resolutions: 720x480, 720x576. 720x576 may be required to satisfy a PC99 requirement (14.14.1).

Additions and Changes

5.12.01.8000-8.30.15

(01/14/2000)

This version supersedes version 5.01.8.30.14. This is a tip source build.

This version provides extra customer-specific installation files.

Problems have been fixed. See Resolved Issues.

Resolved Issues

- CR30680 DirectX7 D3DIM Samples "Bump Waves" Corruption on all mode. Resolved as not a driver bug.
- CR33145 WHQL DVD Test Tool – Flip Lock Delay Test.
- CR33147 WHQL DVD Test Tool – Switch Flip Bob Weave Test.
- CR33148 WHQL DVD Test Tool – Update Overlay Bob Test.
- CR33149 WHQL DVD Test Tool – Flip Bob Order Test.
- CR33150 WHQL DVD Test Tool – Flip Multi Surface Test.
- CR33151 WHQL DVD Test Tool – Flip Test.
- CR33200 DCT300: Savage4 Win2K fails DX6 D3D Overdraw/Underdraw.
- CR33201 DCT300 PC99 INF File Check test: Savage4 Win2K .INF files are missing "ExcludeFromSelect".

Unresolved Issues

- CR26603 [Specific customer configuration] card cannot change to VGA 8x6 mode.
- CR26786 Windowed Dirloop does not run smoothly in 10x7x16bpp/256colors.
- CR27500 DCT v150 DUAL Cpu: PC98 hang on Var20:PC98 linear-mapped low-res modes when run all PC98 tests. This problem does not appear on rev D Savage4 boards. No workaround for older boards has yet been found.
- CR27830 8.22.04 Video clips and Speedy cause system hang when leave on for about 1 hour. SQA has verified that this is not fixed in rev D hardware.
- CR27873 On dual CPU, play video clip and move mouse: causes system hang. This problem does not appear on rev D Savage4 boards. No workaround for older boards has yet been found.
- CR27953 3D WinBench99 failed Quality Tests.
- CR28040 Savage4: Mediamatics DVD with Win2000 - Notice playback when scaling jagged edges appear.
- CR28184 FIFO noise appears when selecting between applications in Add/Remove Program Window.

- CR28274 The following games lock up when attempting to launch: Powerslide, Half Life, Shogo.
- CR28276 Close Combat III: If the user attempts to access the scenario editor, immediately after launching the game, the game will exit to desktop.
- CR28279 Caesar III: The bitmap image is missing from the autorun menu, and fonts are missing from the loading screen boxes during installation.
- CR28287 Tiger Woods Golf '99: There is a moderate amount of texture flickering in background of playing area.
- CR28292 Tiger Woods: The game will not run properly in any mode above 800x600. The same bug occurs with 9x, and also on TNT.
- CR28303 Microsoft BaseBall 3D: The color key appears incorrect, and there is serious flickering Beta Preview failed MipFilter Linear – MinPoint and MinLinear.
- CR28318 FIFO Noise in Winbench99 ver 1.1 Business Graphics Winmark tests in 16x12x32bpp when Mclk = 110.
- CR28461. Rev C only: On DUAL CPU, 3D pipe ScreenSaver causes system hang. This is probably another instance of the problem described in CR27982.
- CR28749 2D: My Computer icon becomes discolored when accessing CD-ROM applications in all 8-bit modes.
- CR28813 WHQL PC99 DCT200 – Beta Preview failed PC99#34 Performance.
- CR28814 WHQL PC99 DCT200 - Beta Preview failed MipFilter Point - Non-Square Width, NonSquare Height and Full Square tests.
- CR28868 WHQL PC99 DCT200 – Beta Preview failed MipFilter Linear tests – Non-Square Width NonSquare Height, etc..
- CR28910 WHQL PC99 DCT200 – Beta Preview failed MipFilter Linear – MinPoint and MinLinear.
- CR28913 WHQL PC99 DCT200 – Beta Preview failed PC99TA 6.8.6 720x568 resolution.
- CR28914 WHQL PC99 DCT200 – Beta Preview failed PC99TA 6.8.4 YUV support.
- CR28915 WHQL PC99 DCT200 – Beta Preview failed PC99TA 6.8.5 Qual Scaling Cons.
- CR28916 WHQL PC99 DCT200 – Beta Preview failed MipFilter Point – LOD Bias.
- CR28919 WHQL PC99 DCT200 – Beta Preview – PCI Latency Win2000, results inconclusive.
- CR28971 Wargasm: All pre-gameplay menu screens will only display in windowed mode.
- CR28984 Corruption in 3D FlipCube when full screen AVI played and full-screen dirloop in background. 16x12x32bpp.
- CR28985 FIFO noise in 3D FlipCube in 16x12x32bpp. 16MB and 32MB boards only.
- CR29025 DFP & CRT Displays: 8.16.04, display is forced into VGA mode after a successful installation of the driver if DFP is connected but powered off.
- CR29136 Background color changed with stream on at 8bpp.
- CR29149 WHQL PC99 DCT200 - Beta Preview failed Bit-Exotic tests.
- CR29343 SimCity 3000 occasionally missing triangles when run game demo
- CR29363 Pixel Drop occurs on dos loop command prompt title bar using Savage4 Pro (86C397P) with driver 8.23.13.
- CR29455 Pixel drop when drag a window on top of a movie window
- CR29466 3D WinBench 1.2 3D WinMark blue screen trap when test setting is 10x7x32bpp. 16MB and 32MB boards only.
- CR29497 Mediamatics: system hang when playing DVD in 1600x1200x32 mode
- CR29499 Mediamatics: video will not play, application error when playing in 11x8, 12x10, 32bpp modes
- CR29501 Mediamatics: loss of video/app hang when toggling to full screen command prompt while DVD is playing
- CR29502 Mediamatics: video is jaggy when downscaled below 50%

- CR29511 Mediamatics: player is corrupted when explorer is opened in 8bpp modes
- CR29513 Mediamatics: cannot play mpg2 file aqua_001.mpg
- CR29601 Quadrant HWDVD: multicolored blocks left behind from pop-up windows on desktop
- CR29602 Quadrant HWDVD: subtitles flicker
- CR29653 Driver version didn't update after updated the driver. Particular installation sequence.
- CR29811 Color corruption in media player when exit 2D FlipCube in 16 and 32 bpp modes with avi running in the background.
- CR29822 [Specific customer] Rev C boards: Noise when resize My Computer when avi is open. More severe in high res modes.
- CR30756 Shogo – will only display in windowed mode.
- CR30889 DX7 D3DIM w/ Bld 2128RC2, MFC Texture Sample: 8.30.05, black blocky w/ gray bckgrnd corruption's are shown after resuming system from Hibernation, occurs on rev D Sav4.
- CR30907 DX7 D3DIM w/ Bld 2128RC2, MFC Texture Sample: 8.30.05, at 32bpp sys hard hangs after resuming from Hibernation, whole screen corruption at 16bpp, occurs on Sav4 Xtreme.
- CR30915 DFP & CRT, Bld 2128RC2: 8.30.05, Mpeg/Avi playback fullscreen only fills at least 25% at top of the screen, the rest is blank, found with particular customer configurations and combinations of monitor/DFP flat panel.
- CR31317 [Specific customer config]: HCT ACPI Stress Device I/O occurs error message: driver prevents machine to Standby.
- CR31328 Cannot switch to FP720 if one selects 6x4 or 8x6 mode and checks the "Expand" box
- CR31387 System can't recover if performing HCT ACPI Stress Device I/O and Wake Times test
- CR31512 System hard hang if open three of the Boids, Bump Earth, Waves on resolution 10x7x32.
- CR32075 Blue screen and hard hang when running Bend and Bump Earth if maximize and minimize the Bump Earth.
- CR32076 Multi-Monitor: noise appears when draw and move Display Properties windows.
- CR32308 Microsoft bug #392666. DX7 SDK Stencil Depth application shows as a black screen when Show Depth Complexity is selected.
- CR33060 WHQL: DCT300 OpenGL test fails.
- CR33093 WHQL DCT300: PC99TA 6.8.4YUV support fail.
- CR33094 WHQL DCT300: PC99#31 Texture Sizes fail.
- CR33095 WHQL DCT300: Overlay: the half bottom of the screen will be black when run overlay in low res ddraw modes lower than 512x384.
- CR33096 WHQL DCT300:MipFilter Point-NonSquare fail.
- CR33152 WHQL DVD Test Tool – Exclusive Mode Playback Test fails.

5.12.01.8000-8.30.14

12/21/1999

This version supersedes version 5.01.8.30.13. This is a tip source build.

This version uses the WHQL-required DirectX prefix version (5.12.01.8000), to indicate that the driver supports Win2000 DirectX 7.0 support. The internal S3 version number, 8.30.14, can still be viewed using the Display Properties Driver Details option.

This driver uses S3 names for the binaries, and an S3-specific S3SAVAGE4 service name for registry key settings. The S3 names are used to distinguish an S3-produced driver from a Microsoft in-the-box driver, so that upgrades of one do not overwrite the files of the other.

The CAT file (Win2000 Catalog file) is included in this release, and is named in the .INF via the CatalogFile directive. Microsoft WHQL is now requesting this file again.

Resolved Issues

- No CR A customer reported failures in the DVD99 testing. This driver fixes failures in DVD99 DISPLAY tests Flip Lock Delay and Flip.
- CR32625 Savage4 W2K driver 8.30.13 does not follow the Microsoft version numbering scheme. Fixed.

Unresolved Issues

- CR26603 [Specific customer configuration] card cannot change to VGA 8x6 mode.
- CR26786 Windowed Dirloop does not run smoothly in 10x7x16bpp/256colors.
- CR27500 DCT v150 DUAL Cpu: PC98 hang on Var20:PC98 linear-mapped low-res modes when run all PC98 tests. This problem does not appear on rev D Savage4 boards. No workaround for older boards has yet been found.
- CR27830 8.22.04 Video clips and Speedy cause system hang when leave on for about 1 hour. SQA has verified that this is not fixed in rev D hardware.
- CR27873 On dual CPU, play video clip and move mouse: causes system hang. This problem does not appear on rev D Savage4 boards. No workaround for older boards has yet been found.
- CR27953 3D WinBench99 failed Quality Tests.
- CR28040 Savage4: Mediamatics DVD with Win2000 - Notice playback when scaling jagged edges appear.
- CR28184 FIFO noise appears when selecting between applications in Add/Remove Program Window.
- CR28274 The following games lock up when attempting to launch: Powerslide, Half Life, Shogo.
- CR28276 Close Combat III: If the user attempts to access the scenario editor, immediately after launching the game, the game will exit to desktop.
- CR28279 Caesar III: The bitmap image is missing from the autorun menu, and fonts are missing from the loading screen boxes during installation.
- CR28287 Tiger Woods Golf '99: There is a moderate amount of texture flickering in background of playing area.
- CR28292 Tiger Woods: The game will not run properly in any mode above 800x600. Clarify report details include note: The same bug occurs with 9x, and also on TNT.
- CR28303 Microsoft BaseBall 3D: The color key appears incorrect, and there is serious flickering and screen refresh problems. Some of the issues described in this report are fixed in the 8.23.01 release, but not all.
- CR28310 Rev C: Star Wars Phantom Menace: A horizontal pixel-width strip is visible on the main menu. As title has changed to indicate, this is now believed to occur only with Rev C hardware.
- CR28318 FIFO Noise in Winbench99 ver 1.1 Business Graphics Winmark tests in 16x12x32bpp when Mclk = 110.
- CR28461 Rev C only: On DUAL CPU, 3D pipe ScreenSaver causes system hang. This is probably another instance of the problem described in CR27982.
- CR28749 2D: My Computer icon becomes discolored when accessing CD-ROM applications in all 8-bit modes.
- CR28813 WHQL PC99 DCT200 - Beta Preview failed PC99#34 Performance.
- CR28814 WHQL PC99 DCT200 - Beta Preview failed MipFilter Point - Non-Square Width, NonSquare Height and Full Square tests.
- CR28868 WHQL PC99 DCT200 - Beta Preview failed MipFilter Linear tests - Non-Square Width, NonSquare Height, etc..

CR28910 WHQL PC99 DCT200 – Beta Preview failed MipFilter Linear – MinPoint and MinLinear.

CR28913 WHQL PC99 DCT200 – Beta Preview failed PC99TA 6.8.6 720x568 resolution.

CR28914 WHQL PC99 DCT200 – Beta Preview failed PC99TA 6.8.4 YUV support.

CR28915 WHQL PC99 DCT200 – Beta Preview failed PC99TA 6.8.5 Qual Scaling Cons.

CR28916 WHQL PC99 DCT200 – Beta Preview failed MipFilter Point – LOD Bias.

CR28919 WHQL PC99 DCT200 – Beta Preview – PCI Latency Win2000, results inconclusive.

CR28971 Wargasm: All pre-gameplay menu screens will only display in windowed mode.

CR28984 Corruption in 3D FlipCube when full screen AVI played and full-screen dirloop in background. 16x12x32bpp.

CR28985 FIFO noise in 3D FlipCube in 16x12x32bpp. 16MB and 32MB boards only.

CR29025 DFP & CRT Displays: 8.16.04, display is forced into VGA mode after a successful installation of the driver if DFP is connected but powered off.

CR29136 Background color changed with stream on at 8bpp.

CR29149 WHQL PC99 DCT200 - Beta Preview failed Bit-Exotic tests.

CR29343 SimCity 3000 occasionally missing triangles when run game demo

CR29363 Pixel Drop occurs on dos loop command prompt title bar using Savage4 Pro (86C397P) with driver 8.23.13.

CR29455 Pixel drop when drag a window on top of a movie window

CR29466 3D WinBench 1.2 3D WinMark blue screen trap when test setting is 10x7x32bpp. 16MB and 32MB boards only.

CR29497 Mediamatics: system hang when playing DVD in 1600x1200x32 mode

CR29499 Mediamatics: video will not play, application error when playing in 11x8, 12x10, 32bpp modes

CR29501 Mediamatics: loss of video/app hang when toggling to full screen command prompt while DVD is playing

CR29502 Mediamatics: video is jaggy when downscaled below 50%

CR29511 Mediamatics: player is corrupted when explorer is opened in 8bpp modes

CR29513 Mediamatics: cannot play mpg2 file aqua_001.mpg

CR29601 Quadrant HWDVD: multicolored blocks left behind from pop-up windows on desktop

CR29602 Quadrant HWDVD: subtitles flicker

CR29653 Driver version didn't update after updated the driver. Particular installation sequence.

CR29811 Color corruption in media player when exit 2D FlipCube in 16 and 32 bpp modes with avi running in the background.

CR29822 [Particular customer] Rev C boards: Noise when resize My Computer when avi is open.

CR29924 Quadrant HWDVD: downscaled picture gets "ridges"

CR29935 INSTALL on [Specific systems] w/[Specific customer] BIOS: S3 8.23.xx, Page_Fault bluescreen occurs at boot-up, possibly only when PCI board primary.

CR29954 BIOS version is misreported as 2.1D.07 on some customer-specific boards. This is related to CR29935, and the miscommunication between the customer's video BIOS and the S3 driver's MultiMonitor support code.

SCR30029 Tiger Woods 99 – locks up on black screen when attempting to launch.

CR30067 Speedy hang on resolution 1152x864x8 when running Speedy and maximize one of the PolySolid Windows.

CR30071 [Specific systems/customer] rev D: in-the-box driver, white line fragments appear at desktop at logon or shutdown.

- CR30093 OGL 8.24.02 with ICD: 3D Flower Box blacks out when the screen saver pops up when screen saver box is ON.
- CR30110 OGL 8.24.02 with ICD: Screen Savers box cause flickering when move Display Properties around.
- CR30120 OGL 8.24.02 with ICD: 3D Pipe Screen Saver draw duplicate screen saver in 19x14x16bpp.
- CR30127 Different color appears on the title bar when running Speedy on resolution 19x14x16bpp.
- CR30230 [Specific customer] rev C only: FIFO noise when move video vertically.
- CR30443 GDI/USER inspection tests corruption and hard hang on USER/S/Draw FocusRect test.
- CR30694 Rev E 32-bit only: Pixel drop when shaking Display Properties box. 16bpp only.
- CR30756 Shogo – will only display in windowed mode.
- CR30889 DX7 D3DIM w/ Bld 2128RC2, MFC Texture Sample: 8.30.05, black blocky w/ gray bckgrnd corruptions are shown after resuming system from Hibernation, occurs on rev D Sav4.
- CR30907 DX7 D3DIM w/ Bld 2128RC2, MFC Texture Sample: 8.30.05, at 32bpp sys hard hangs after resuming from Hibernation, whole screen corruption at 16bpp, occurs on Sav4 Xtreme.
- CR30915 DFP & CRT, Bld 2128RC2: 8.30.05, Mpeg/Avi playback fullscreen only fills at least 25% at top of the screen, the rest is blank, found with particular customer configurations and combinations of monitor/DFP flat panel.
- CR31317 [Specific customer config]: HCT ACPI Stress Device I/O occurs error message: driver prevents machine to Standby.
- CR31328 Cannot switch to FP720 if one selects 6x4 or 8x6 mode and checks the "Expand" box
- CR31387 System cannot recover if performing HCT ACPI Stress Device I/O and Wake Times test
- CR31512 System hard hang if open three of the Boids, Bump Earth, Waves on resolution 10x7x32.
- CR32075 Blue screen and hard hang when running Bend and Bump Earth if maximize and minimize the Bump Earth.
- CR32076 Multi-Monitor: noise appears when draw and move Display Properties windows.
- CR32308 Microsoft bug #392666. DX7 SDK Stencil Depth application shows as a black screen when Show Depth Complexity is selected.

5.01.8.30.13

11/23/1999

This version supersedes version 5.01.8.30.12. This is a build based on the 8.30.12 label, with the addition of tip files from the display driver's GX3 directory, which were inadvertently omitted from the 8.30.12 label (and the wrong versions were used in building the 8.30.12 display driver). Other than these files, and the updating of version information, this driver is identical to the 8.30.12 driver.

This driver uses S3 names for the binaries, and an S3-specific S3SAVAGE4 service name for registry key settings. The S3 names are used to distinguish an S3-produced driver from a Microsoft in-the-box driver, so that upgrades of one do not overwrite the files of the other.

The .CAT file (Win2000 Catalog file) is omitted from this release. Microsoft has requested that we no longer include this file in our .INF file and installation disk contents.

Resolved Issues

None, except that certain fixes that were named in the 8.30.12 release letter may not actually have been present in that driver (inadvertently omitted to a label/build problem), but

should be present in this driver. Please refer to the 8.30.12 release letter for bugs fixed, etc.

Unresolved Issues

- CR30093 CR30110, CR30120
- CR26603 [Specific customer configuration] card cannot change to VGA 8x6 mode.
- CR26786 Windowed Dirloop does not run smoothly in 10x7x16bpp/256colors.
- CR27500 DCT v150 DUAL Cpu: PC98 hang on Var20:PC98 linear-mapped low-res modes when run all PC98 tests. This problem does not appear on rev D Savage4 boards. No workaround for older boards has yet been found.
- CR27830 8.22.04 Video clips and Speedy cause system hang when leave on for about 1 hour. SQA has verified that this is not fixed in rev D hardware.
- CR27873 On dual CPU, play video clip and move mouse: causes system hang. This problem does not appear on rev D Savage4 boards. No workaround for older boards has yet been found.
- CR27953 3D WinBench99 failed Quality Tests.
- CR28040 Savage4: Mediamatics DVD with Win2000 - Notice playback when scaling jagged edges appear.
- CR28184 FIFO noise appears when selecting between applications in Add/Remove Program Window.
- CR28274 The following games lock up when attempting to launch: Powerslide, Half Life, Shogo.
- CR28276 Close Combat III: If the user attempts to access the scenario editor, immediately after launching the game, the game will exit to desktop.
- CR28279 Caesar III: The bitmap image is missing from the autorun menu, and fonts are missing from the loading screen boxes during installation.
- CR28287 Tiger Woods Golf '99: There is a moderate amount of texture flickering in background of playing area.
- CR28292 Tiger Woods: The game will not run properly in any mode above 800x600. The same bug occurs with 9x, and also on TNT.
- CR28303 Microsoft BaseBall 3D: The color key appears incorrect, and there is serious flickering and screen refresh problems. Some of the issues described in this report are fixed in the 8.23.01 release, but not all.
- CR28310 Rev C: Star Wars Phantom Menace: A horizontal pixel-width strip is visible on the main menu. As title has changed to indicate, this is now believed to occur only with Rev C hardware.
- CR28318 FIFO Noise in Winbench99 ver 1.1 Business Graphics Winmark tests in 16x12x32bpp when Mclk = 110.
- CR28461 Rev C only: On DUAL CPU, 3D pipe ScreenSaver causes system hang. This is probably another instance of the problem described in CR27982.
- CR28749 2D: My Computer icon becomes discolored when accessing CD-ROM applications in all 8-bit modes.
- CR28813 WHQL PC99 DCT200 - Beta Preview failed PC99#34 Performance.
- CR28814 WHQL PC99 DCT200 - Beta Preview failed MipFilter Point - Non-Square Width, NonSquare Height and Full Square tests.
- CR28868 WHQL PC99 DCT200 - Beta Preview failed MipFilter Linear tests - Non-Square Width, NonSquare Height, etc..
- CR28910 WHQL PC99 DCT200 - Beta Preview failed MipFilter Linear - MinPoint and MinLinear.
- CR28913 WHQL PC99 DCT200 - Beta Preview failed PC99TA 6.8.6 720x568 resolution.
- CR28914 WHQL PC99 DCT200 - Beta Preview failed PC99TA 6.8.4 YUV support.
- CR28915 WHQL PC99 DCT200 - Beta Preview failed PC99TA 6.8.5 Qual Scaling Cons.

CR28916 WHQL PC99 DCT200 – Beta Preview failed MipFilter Point – LOD Bias.
CR28919 WHQL PC99 DCT200 – Beta Preview – PCI Latency Win2000, results inconclusive.
CR28971 Wargasm: All pre-gameplay menu screens will only display in windowed mode.
CR28984 Corruption in 3D FlipCube when full screen AVI played and full-screen dirloop in background. 16x12x32bpp.
CR28985 FIFO noise in 3D FlipCube in 16x12x32bpp. 16MB and 32MB boards only.
CR29025 DFP & CRT Displays: 8.16.04, display is forced into VGA mode after a successful installation of the driver if DFP is conSome systems:ted but powered off.
CR29136 Background color changed with stream on at 8bpp.
CR29149 WHQL PC99 DCT200 - Beta Preview failed Bit-Exotic tests.
CR29343 SimCity 3000 occasionally missing triangles when run game demo
CR29363 Pixel Drop occurs on dos loop command prompt title bar using Savage4 Pro (86C397P) with driver 8.23.13.
CR29455 Pixel drop when drag a window on top of a movie window
CR29466 3D WinBench 1.2 3D WinMark blue screen trap when test setting is 10x7x32bpp. 16MB and 32MB boards only.
CR29497 Mediamatics: system hang when playing DVD in 1600x1200x32 mode
CR29499 Mediamatics: video will not play, application error when playing in 11x8, 12x10, 32bpp modes
CR29501 Mediamatics: loss of video/app hang when toggling to full screen command prompt while DVD is playing
CR29502 Mediamatics: video is jaggy when downscaled below 50%
CR29511 Mediamatics: player is corrupted when explorer is opened in 8bpp modes
CR29513 Mediamatics: cannot play mpg2 file aqua_001.mpg
CR29601 Quadrant HWDVD: multicolored blocks left behind from pop-up windows on desktop
CR29602 Quadrant HWDVD: subtitles flicker
CR29653 Driver version did not update after updated the driver. Particular installation sequence:
CR29811 Color corruption in media player when exit 2D FlipCube in 16 and 32 bpp modes with avi running in the background.
CR29822 [Particular customer] Rev C boards: Noise when resize My Computer when avi is open.
CR29924 Quadrant HWDVD: downscaled picture gets "ridges"
CR29935 INSTALL on [Specific systems] w/[Specific customer] BIOS: S3 8.23.xx, Page_Fault bluescreen occurs at boot-up,... possibly only when PCI board primary.
CR29954 BIOS version is misreported as 2.1D.07 on some customer-specific boards. This is related to CR29935, and the miscommunication between the customer's video BIOS and the S3 driver's MultiMonitor support code.
CR30029 Tiger Woods 99 – locks up on black screen when attempting to launch.
CR30067 Speedy hang on resolution 1152x864x8 when running Speedy and maximize one of the PolySolid Windows.
CR30071 [Specific systems/customer] rev D: in-the-box driver, white line fragments appear at desktop at logon or shutdown.
CR30127 Different color appears on the title bar when running Speedy on resolution 19x14x16bpp.
CR30230 [Specific customer] rev C only: FIFO noise when move video vertically.
CR30443 GDI/USER inspection tests corruption and hard hung on USER/S/Draw FocusRect test.
CR30694 Rev E 32-bit only: Pixel drop when shaking Display Properties box. 16bpp only.

- CR30756 Shogo – will only display in windowed mode.
- CR30889 DX7 D3DIM w/ Bld 2128RC2, MFC Texture Sample: 8.30.05, black blocky w/ gray bckgrnd corruptions are shown after resuming system from Hibernation, occurs on rev D Sav4.
- CR30907 DX7 D3DIM w/ Bld 2128RC2, MFC Texture Sample: 8.30.05, at 32bpp sys hard hangs after resuming from Hibernation, whole screen corruption at 16bpp, occurs on Sav4 Xtreme.
- CR30915 DFP & CRT, Bld 2128RC2: 8.30.05, Mpeg/Avi playback fullscreen only fills at least 25% at top of the screen, the rest is blank, found with particular customer configurations and combinations of monitor/DFP flat panel.
- CR31317 [Specific customer config]: HCT ACPI Stress Device I/O occurs error message: driver prevents machine to Standby.
- CR31328 Cannot switch to FP720 if one selects 6x4 or 8x6 mode and checks the "Expand" box
- CR31387 System cannot recover if performing HCT ACPI Stress Device I/O and Wake Times test
- CR31512 System hard hang if open three of the Boids, Bump Earth, Waves on resolution 10x7x32.
- CR32075 Blue screen and hard hang when running Bend and Bump Earth if maximize and minimize the Bump Earth.
- CR32076 Multi-Monitor: noise appears when draw and move Display Properties windows.
- CR32308 Microsoft bug #392666. DX7 SDK Stencil Depth application shows as a black screen when Show Depth Complexity is selected.

5.01.8.30.11

10/22/1999)

This version supersedes version 5.01.8.30.10. This is a tip build.

Bugs have been fixed. See Resolved Issues.

Microsoft 416842: S3SAVAGE4: MINI: Locks up in guimode trying to load savage4 miniport from VGA. This has not been reproduced at S3 on-site, but this driver incorporates a fix that Microsoft made to prevent the problem (GetEdid information cached at S3Initialize time used at pre-first-modeset GetChildDescriptor).

Fixed system hang problem while running Exclusive Mode Playback in WHQL DVD Test Kit. Fix was in MCS3SURF.C.

A problem with 12x10 panels and Savage4 has been fixed, see CR30017 for NT4.

CR29178 Microsoft-reported problem, but Microsoft bug number unknown. A pointer problem on a specific customer's scalable flat panel all-in-one configuration (using older video BIOS, x.xC.xx series) has been resolved. The problem would occur when switching to 800x600x8 from a higher color-depth mode.

This driver incorporates some fixes made by Microsoft for resume-from-hibernation problems. Also some more registers are being saved/restored at S3Get/SetPostRegs time, to improve hibernation support.

CR29465 System hangs when running both D3DIM Samples Lights and Bend (possibly only with rev D boards that have FP and TV-out support, and possibly mostly if Mhz=143). This problem has not been positively reproduced and verified as fixed, but please try to reproduce then check if this driver fixes it. There are two fixes in this release (CR60 SDCLK skew patch and 143 Mhz patch) that might resolve this problem.

CR30016 DX7 SDK D3DX Tentacle cause system hang when turn right/left/up/down when Mclk=143. Fixed.

CR30418 WinBench 99 Version 1.1 "DirectDraw Tests" hang with Rev.D MClk=143 board. Not yet verified, but please retest as this problem is probably fixed by this release.

- CR30034 DirectX 7SDK Samples 'Bend' hangs on build 2105 after few seconds. Not verified on build 2105, but this release includes a CR60 patch of SDCLK skew which may fix this problem. Please retest.
- CR29339 MultiMonitor: SimCity 3000 text under desktop icons corrupted on one display screen if run game demo on the other monitor screen
- CR30943 Multi-Monitor: Running Babycha Avi and Dirloop together causes system to hang.
- CR30956 Multi-Monitor: Running Babycha Avi and 3DFlipcube causes discoloration
- CR31104 MULTIMON hung at Windows bootup screen after install drivers in certain systems.
- CR31106 Multi-Monitor: When running Babycha Avi and Dirloop together causes corruption on Secondary monitor

Unresolved Issues

- CR26603 [Specific customer configuration] card cannot change to VGA 8x6 mode.
- CR26786 Windowed Dirloop does not run smoothly in 10x7x16bpp/256colors.
- CR27500 DCT v150 DUAL CPU: PC98 hang on Var20:PC98 linear-mapped low-res modes when run all PC98 tests. This problem does not appear on rev D Savage4 boards. No workaround for older boards has yet been found.
- CR27830 8.22.04 Video clips and Speedy cause system hang when leave on for about 1 hour. SQA has verified that this is not fixed in rev D hardware.
- CR27873 On dual CPU, play video clip and move mouse: causes system hang. This problem does not appear on rev D Savage4 boards. No workaround for older boards has yet been found.
- CR27953 3D WinBench99 failed Quality Tests.
- CR28031 DX6.1 D3DIM samples- Compress: Blue screen when switching texture at 12x10x16.
- CR28040 Savage4: Mediamatics DVD with Win2000 - Notice playback when scaling jagged edges appear.
- CR28178 Rev D only: Block of pixel drop along the title bar of video when moves to off screen slowly 16x12x16@60Hz.
- CR28184 FIFO noise appears when selecting between applications in Add/Remove Program Window.
- CR28274 The following games lock up when attempting to launch: Powerslide, Half Life, Shogo.
- CR28275 Baldur's Gate: A DirectDraw error occurs when attempting to load a post-install cinematic. Note, however, that despite this error pop-up, This does not affect gameplay, or the successful completion of the installation.
- CR28276 Close Combat III: If the user attempts to access the scenario editor, immediately after launching the game, the game will exit to desktop.
- CR28278 Caesar III: The game will frequently refuse to enter windowed mode.
- CR28279 Caesar III: The bitmap image is missing from the autorun menu, and fonts are missing from the loading screen boxes during installation.
- CR28281 Star Wars Episode 1: no fog appears in the game. Win9x corresponding problem is CR28041. Fog partially fixed in 8.23.12 driver release, but according to games tester, the fogging effect is not yet thick enough.
- CR28287 Tiger Woods Golf '99: There is a moderate amount of texture flickering in background of playing area.
- CR28292 Tiger Woods: The game will not run properly in any mode above 800x600. The same bug occurs with 9x, and also on TNT.
- CR28303 Microsoft BaseBall 3D: The color key appears incorrect, and there is serious flickering and screen refresh problems. Some of the issues described in this report are fixed in the 8.23.01 release, but not all.

- CR28304 Wargasm: After launch, the main menu and all subsequent menus will shake vertically. Behavior improved significantly in 8.23.01 release, and severity was decreased. Still needs additional fixing.
- CR28310 Rev C: Star Wars Phantom Menace: A horizontal pixel-width strip is visible on the main menu. As title has changed to indicate, this is now believed to occur only with Rev C hardware.
- CR28445 WHQL PC99 DCT200 – DirectDraw, Blt- ColorKey – Vmem to Primary test failed. The failing tests are pixel mismatch problems in the portion of the test BLT, SRCKEY (from Vmem) with unused pixel bits set. The problem stems from our not having the ability to limit the bits used for a blt colorkey to anything less than the color depth normally uses. This test is setting alpha bits in 32bpp, but setting the mask for the alpha bits to be ignored – our hardware doesn't know to ignore them.
- CR28461 Rev C only: On DUAL CPU, 3D pipe ScreenSaver causes system hang. This is probably another instance of the problem described in CR27982.
- CR28749 2D: My Computer icon becomes discolored when accessing CD-ROM applications in all 8-bit modes.
- CR28787 WHQL PC99 DCT200 - Beta Preview-Cubic Mapping tests (Yaw, Pitch, Mipmapping), required capabilities not detected.
- CR28789 WHQL PC99 DCT200 - Beta Preview failed PC99#29 Multi Texturing.
- CR28807 WHQL PC99 DCT200 - Beta Preview-Bump Map Textures test, required capabilities not detected.
- CR28808 WHQL PC99 DCT200 - Beta Preview-Luminance Textures, required capabilities not detected.
- CR28809 WHQL PC99 DCT200 - Beta Preview-Lightmap, required capabilities not detected.
- CR28813 WHQL PC99 DCT200 - Beta Preview failed PC99#34 Performance.
- CR28814 WHQL PC99 DCT200 - Beta Preview failed MipFilter Point - Non-Square Width, NonSquare Height and Full Square tests.
- CR28949 Joytech boards: Noise when move Advance Display Properties up and down. More severe in high res modes.
- CR28971 Wargasm: All pre gameplay menu screens will only display in windowed mode
- CR28974 Star Wars Pod Racer: Background and characters are not drawn properly.
- CR28981 H/W cursor flashes when running a DDraw app
- CR28984 Corruption in 3D FlipCube when full screen avi played and full screen dirloop in background. 16x12x32bpp.
- CR28985 Noise in 3D FlipCube in 16x12x32bpp. 16MB and 32MB boards only.
- CR29025 DFP & CRT Displays: 8.16.04, display is forced into VGA mode after a successful installation of the driver if DFP is conSome systems:ted but powered off.
- CR29045 DFP (Viewsonic150): 8.23.12, DFP does not turn-off when Power Scheme Monitor-Off is set, the display just flickers, happens on certain customer configurations.
- CR29093 Win2K (Bld 2031): [Certain customer] 8.23.12, cannot change modes after installing drivers on [customer] boards.
- CR29136 Background color changed with stream on at 8bpp.
- CR29149 WHQL PC99 DCT200 - Beta Preview failed Blt-Exotic tests.
- CR29343 SimCity 3000 occasionally missing triangles when run game demo
- CR29363 Pixel Drop occurs on dos loop command prompt title bar using Savage4 Pro (86C397P) with driver 8.23.13.
- CR29419 [Particular customer] (MS1) - Win 2000 #9 AVI corruption in 256 color.
- CR29455 Pixel drop when drag a window on top of a movie window
- CR29466 3D WinBench 1.2 3D WinMark blue screen trap when test setting is 10x7x32bpp. 16MB and 32MB boards only.
- CR29497 Mediamatics: system hang when playing DVD in 1600x1200x32 mode

CR29499 Mediamatics: video will not play, application error when playing in 11x8, 12x10, 32bpp modes

CR29501 Mediamatics: loss of video/app hang when toggling to full screen command prompt while DVD is playing

CR29502 Mediamatics: video is jaggy when downscaled below 50%

CR29511 Mediamatics: player is corrupted when explorer is opened in 8bpp modes

CR29513 Mediamatics: cannot play mpg2 file aqua_001.mpg

CR29596 WHQL DCT200: Win2000 build 2072 hung on Win2000 GDI GUIMAN WinGDI test when run All Auto

CR29600 Quadrant HWDVD: playback scrambles, jitters, macroblocks, gets blocky when downscles, upscaled

CR29601 Quadrant HWDVD: multicolored blocks left behind from pop-up windows on desktop

CR29602 Quadrant HWDVD: subtitles flicker

CR29606 [Particular customer] (MS1)- W2K: Video never recovers from the manual standby. Note: also happens with a competitor's product on same system.

CR29653 Driver version did not update after updated the driver. Particular installation sequence.

CR29734 Rev. E 32 bit only. FIFO noise when move Display Properties box. 12x10x32@60

CR29740 Rev. E 32 bit only. FIFO noise in 3DFLipCube in 12x10x32@60 test modes causes system hung.

CR29744 Rev. E 32 bit only. 2D Flip Cube shakes horizontally when test setting is 12x10x32@60

CR29811 Color corruption in media player when exit 2D FlipCube in 16 and 32 bpp modes with avi running in the background.

CR29815 WHQL PC99 DCT 98 V200- Test Manager hung at BLT_offscreen overlap

CR29822 [Particular customer] Rev C boards: Noise when resize My Computer when avi is open.

CR29924 Quadrant HWDVD: downscaled picture gets "ridges"

CR29927 WHQL PC99 DCT 200: D3D failed in Overdraw/underdraw on 32-bit memory access board

CR29954 BIOS version is misreported as 2.1D.07 on some customer-specific boards. This is related to CR29935, and the miscommunication between the customer's video BIOS and the S3 driver's MultiMonitor support code.

Microsoft bug #392666. DX7 SDK Stencil Depth application shows as a black screen when Show Depth Complexity is selected.

CR30029 Tiger Woods 99- locks up on black screen when attempting to launch.

CR30031 Baldur's Gate- menu buttons flickering.

CR30049 Star Wars Phantom Menace- locks up in gameplay.

CR30067 Speedy hang on resolution 1152x864x8 when running speedy and maximize one of the PolySolid windows.

CR30071 [Specific customer configuration] systems w/ [non-S3 generic] rev D card: In-Box driver, white line fragments appear at desktop at logon or shutdown or during line scrolls at high res modes (16x12,19x14 at 16bpp).

CR30087 DCT200 Win2K(2072) gave KMODE_EXCEPTION_NOT_HANDLED blue screen trap when trying to execute dct.

CR30127 Different color appears on the title bar when running speedy on resolution 19x14x16.

CR30230 [Specific customer] boards Rev C only: FIFO noise when move video vertically.

CR30443 GDI/USER inspection Tests corruption and hard hung on "USER/S/Draw FocusRect" test

- CR30671 [Specific customer configuration], Savage Xtreme 16MB SGRAM: In-Box 8.23.01 Bld 2105, During OEM HCT 9.2 Sys Stress, Bluescreen Stop: Special_Pool_Detected_Memory_Corruption while verifying only S3Sav4.dll
CR30680: DirectX7 D3DIM Samples "Bump Waves" Corruption on all mode. Only happens when Null Driver is selected (and can be reproduced with non-S3 adapter).
- CR30694 Rev. E 32 bit only: Pixel Drop when shaking Display Properties.
- CR30756 Shogo- will only display in windowed mode.
- CR30889 DX7 D3DIM w/ Bld 2128RC2, MFC Texture Sample: 8.30.05, black blocky w/ gray background corruption's are shown after resuming system from Hibernation, occurs on rev D Sav4.
- CR30900 DX7 DDRAW w/ Bld 2128RC2, MultiMon Sample: In-Box 8.23.01-->8.30.05, HW cursor flickers during test. Occurs on Sav4/Extreme. G200 is OK, TNT2 hides the cursor.
- CR30907 DX7 D3DIM w/ Bld 2128RC2, MFC Texture Sample: 8.30.05, at 32bpp sys hard hangs after resuming from Hibernation, whole screen corruption at 16bpp, occurs on Sav4 Xtreme. CR30915: DFP & CRT, Bld 2128RC2: 8.30.05, Mpeg/Avi playback fullscreen only fills at least 25% at top of the screen, the rest is blank, found with particular customer configurations and combinations of monitor/DFP flat panel. CR31002: Multi-Monitor: DirectX7 SDK, the image of BEND doesn't return.
- CR31095 Multi-Monitor: System Properties Window Shows Gray Coloring Around the Monitor Picture

(5.01.8.30.08. 10/06/1999)

This version supersedes version 5.01.8.30.07.

A change was made to DdUpdateOverlay for the WHQL Motion Video DVD Test Kit (aka DVD99) Display test Flip Bob Order. It does not yet fix the problem, but as the code change may affect other ddflip applications, it should be tested for regression.

In this release, the .INF file changes the driver registry key from S3INC to S3Savage4M. The M indicates that this is the Savage4-Microsoft registry key. Having a separate registry key from other S3 drivers (and from the S3 WHQL/customer drivers) should help prevent driver upgrade problems. Separate binary names and registry keys for Microsoft in-the-box builds vs. S3 builds should help maintain clearly separate upgrades. The following table shows the names that will be used in future releases:

	Microsoft Win2000 in-the-box candidates	S3 customer or WHQL candidate releases
Main driver registry key	S3SAVAGE4M	S3SAVAGE4
Miniport binary name	S3SAV4M.SYS	S3SAVG4M.SYS
Display Driver binary name	S3SAV4.DLL	S3SAVG4.DLL

- Bugs have been fixed. See Resolved Issues.

Resolved Issues

5.01.8.30.08.

(10/06 /1999)

- CR28812 CR29926. WHQL PC99 DCT250 – PC99 failed PC99#31 Texture Sizes. Fixed. Note that this test should now run correctly with either DCT250.4 (already fixed in 8.30.02) or DCT250.5. The fix should also be included in the next release of the 8.24.xx driver stream (may be best to open a separate.
- CR29966 WHQL DCT250: D3D failed TextureStage tests. Fixed.
- CR29601 and MS 386670D. Artifacts on Savage4 during HW DVD playback. Fixed.

Part of MS 386670D. The fix for Savage4 Split-n-Freeze bug for tiny vertical size of DirectShow window in HW DVD playback has been somewhat revised, and should be re-tested. See Driver Release History entry for 8.30.07.

Microsoft reported a trap problem with a version of Morph (invalid parameter test) that is not yet formally released (it will be in DCT300). We received a copy of the test, and this driver fixes the particular problem that was reported.

CR27798 DX Samples Light's on-window display was moved to second D3D sample. NOTE: Win2000 builds past 2135 (e.g. 2141) allow for addresses to change at DdLock time. That will fix CR27798.

This driver contains a workaround for a PNP installation hang that was seen at Microsoft and at S3. The problem was happening because of a conflict of the S3 driver and VGA driver: VGA driver was using some registers (sequencer registers, it seems) for drawing at the same time as the S3 driver was using them within GetChildDescriptor/GetEdid.

5.01.8.30.07.

(9/29/1999)

This version supersedes version 5.01.8.30.06. Bugs have been fixed. See Resolved Issues.

5.01.8.30.06. 9/24/1999)

This version supersedes version 5.01.8.30.05.

This driver should be identical to 5.01.8.30.05 except for version information and in the file S3.C, where a correction has been made to a power management workaround for specific Savage4 boards.

Files changed vs. 5.01.8.30.05:

S3.C (miniport)

GX3VER.H

.INF files (S3 generic, and customized)

One bug fixed. See Resolved Issues.

Resolved Issues

Microsoft reported a power management problem on Savage4 boards. The problem was with the D3 Sleep State. This release fixes that problem.

Unresolved Issues

CR26603 Gainward card cannot change to VGA 8x6 mode.

CR26786 Windowed Dirloop does not run smoothly in 10x7x16bpp/256colors.

CR27346 DX6.1 D3DIM samples- MFCtexture: the texture on the wall disappears; no texture display. This appears to be an application bug, that the reference rasterizer and RGB emulation results do not match at 16bpp. Driver behavior appears to be correct.

CR27500 DCT v150 DUAL Cpu: PC98 hang on Var20:PC98 linear-mapped low-res modes when run all PC98 tests. This problem does not appear on rev D Savage4 boards. No workaround for older boards has yet been found.

CR27830 8.22.04 Video clips and Speedy causes system hang when on for about 1 hour. SQA has verified that this is not fixed in rev D hardware.

CR27873 On dual CPU, play video clip and move mouse: causes system hang. This problem does not appear on rev D Savage4 boards. No workaround for older boards has yet been found.

CR27953 3D WinBench99 failed Quality Tests.

CR28031 DX6.1 D3DIM samples- Compress: Blue screen when switching texture at 12x10x16.

CR28040 Savage4: Mediamatics DVD with Win2000 - Notice playback when scaling jagged edges appear.

- CR28178 Rev D only: Block of pixel drop along the title bar of video when moves to off screen slowly 16x12x16@60Hz.
- CR28184 FIFO noise appears when selecting between applications in Add/Remove Program Window.
- CR28274 The following games lock up when attempting to launch: Powerslide, Half Life, Shogo.
- CR28275 Baldur's Gate: A DirectDraw error occurs when attempting to load a post-install cinematic. Note, however, that despite this error pop-up, This does not affect gameplay, or the successful completion of the installation.
- CR28276 Close Combat III: If the user attempts to access the scenario editor, immediately after launching the game, the game will exit to desktop.
- CR28278 Caesar III: The game will frequently refuse to enter windowed mode.
- CR28279 Caesar III: The bitmap image is missing from the autorun menu, and fonts are missing from the loading screen boxes during installation.
- CR28281 Star Wars Episode 1: no fog appears in the game. Win9x corresponding problem is CR28041. Fog partially fixed in 8.23.12 driver release, but according to games tester, the fogging effect is not yet thick enough.
- CR28287 Tiger Woods Golf '99: There is a moderate amount of texture flickering in background of playing area.
- CR28292 Tiger Woods: The game will not run properly in any mode above 800x600. The same bug occurs with 9x, and also on TNT.
- CR28303 Microsoft BaseBall 3D: The color key appears incorrect, and there is serious flickering and screen refresh problems. Some of the issues described in this report are fixed in the 8.23.01 release, but not all.
- CR28304 Wargasm: After launch, the main menu and all subsequent menus will shake vertically. Behavior improved significantly in 8.23.01 release, and severity was decreased. Still needs additional fixing.
- CR28310 Rev C: Star Wars Phantom Menace: A horizontal pixel-width strip is visible on the main menu. As title has changed to indicate, this is now believed to occur only with Rev C hardware.
- CR28445 WHQL PC99 DCT200 – DirectDraw, Blt- ColorKey – Vmem to Primary test failed. The failing tests are pixel mismatch problems in the portion of the test BLT, SRCKEY (from Vmem) with unused pixel bits set. **The problem stems from our not having the ability to limit the bits used for a blt colorkey to anything less than the color depth normally uses.** This test is setting alpha bits in 32bpp, but setting the mask for the alpha bits to be ignored – our hardware doesn't know to ignore them. All that remains is for us to get the appropriate waiver or incident ID.
- CR28461 Rev C only: On DUAL CPU, 3D pipe ScreenSaver causes system to hang. This is probably another instance of the problem described in CR27982.
- CR28749 2D: Computer icon becomes discolored when accessing CD-ROM applications in all 8-bit modes.
- CR28787 WHQL PC99 DCT200 - Beta Preview-Cubic Mapping tests (Yaw, Pitch, Mipmapping), required capabilities not detected.
- CR28789 WHQL PC99 DCT200 - Beta Preview failed PC99#29 Multi Texturing.
- CR28807 WHQL PC99 DCT200 - Beta Preview-Bump Map Textures test, required capabilities not detected.
- CR28808 WHQL PC99 DCT200 - Beta Preview-Luminance Textures, required capabilities not detected.
- CR28809 WHQL PC99 DCT200 - Beta Preview-Lightmap, required capabilities not detected.
- CR28812 WHQL PC99 DCT200 - Beta Preview failed PC99#31 Texture Sizes.
- CR28813 WHQL PC99 DCT200 - Beta Preview failed PC99#34 Performance.

CR28814 WHQL PC99 DCT200 - Beta Preview failed MipFilter Point - Non-Square Width, NonSquare Height and Full Square tests.

CR28949 Joytech boards: Noise when move Advance Display Properties up and down. More severe in high res modes.

CR28971 Wargasm: All pre gameplay menu screens will only display in windowed mode

CR28974 Star Wars Pod Racer: Background and characters are not drawn properly.

CR28981 H/W cursor flashes when running a DDraw app

CR28984 Corruption in 3D FlipCube when full screen avi played and full screen dirloop in background. 16x12x32bpp.

CR28985 Noise in 3D FlipCube in 16x12x32bpp. 16MB and 32MB boards only.

CR29025 DFP & CRT Displays: 8.16.04, display is forced into VGA mode after a successful installation of the driver if DFP is conSome systems:ted but powered off.

CR29045 DFP (Viewsonic150): 8.23.12, DFP does not turn-off when Power Scheme Monitor-Off is set, the display just flickers, happens on some systems (revD).

CR29093 Win2K (Bld 2031): 8.23.12, cannot change modes after installing drivers on some boards.

CR29136 Background color changed with stream on at 8bpp.

CR29149 WHQL PC99 DCT200 - Beta Preview failed Bit-Exotic tests.

CR29339 MultiMonitor: SimCity 3000 text under desktop icons corrupted on one display screen if run game demo on the other monitor screen

CR29343 SimCity 3000 occasionally missing triangles when run game demo

CR29363 Pixel Drop occurs on dos loop command prompt title bar using Savage4 Pro (86C397P) with driver 8.23.13.

CR29419 Ares (MS1) - Ares Win 2000 #9 AVI corruption in 256 color.

CR29455 Pixel drop when drag a window on top of a movie window

CR29464 3D Flipcube: No texture when switch mode to 11x8x32(8MB)

CR29465 System hang when running both D3DIM Samples Lights and Bend

CR29466 3D WinBench 1.2 3D WinMark blue screen trap when test setting is 10x7x32bpp. 16MB and 32MB boards only.

CR29497 Mediamatics: system hangs when playing DVD in 1600x1200x32 mode

CR29499 Mediamatics: video will not play, application error when playing in 11x8, 12x10, 32bpp modes

CR29501 Mediamatics: loss of video/app hang when toggling to full screen command prompt while DVD is playing

CR29502 Mediamatics: video is jaggy when downscaled below 50%

CR29511 Mediamatics: player is corrupted when explorer is opened in 8bpp modes

CR29513 Mediamatics: cannot play mpg2 file aqua_001.mpg

CR29596 WHQL DCT200: Win2000 build 2072 hung on Win2000 GDI GUIMAN WinGDI test when run All Auto

CR29600 Quadrant HWDVD: playback scrambles, jitters, macroblocks, gets blocky when downscles, upscaled

CR29601 Quadrant HWDVD: multicolored blocks left behind from pop-up windows on desktop

CR29602 Quadrant HWDVD: subtitles flicker

CR29606 Ares (MS1)- W2K: Video never recovers from the manual standby. Note: also happens with a competitor's product on same system.

CR29653 Driver version did not update after updated the driver. Particular installation sequence:

CR29734 Rev. E 32 bit only. FIFO noise when move Display Properties box. 12x10x32@60

CR29740 Rev. E 32 bit only. FIFO noise in 3DFlipCube in 12x10x32@60 test modes causes system hang.

- CR29744 Rev. E 32 bit only. 2D Flip Cube shakes horizontally when test setting is 12x10x32@60
- CR29811 Color corruption in media player when exit 2D FlipCube in 16 and 32 bpp modes with avi running in the background.
- CR29815 WHQL PC99 DCT 98 V200- Test Manager hung at BLT_offscreen overlap
- CR29822 Joytech Rev C boards: Noise when resize My Computer when avi is open.
- CR29924 Quadrant HWDVD: downscaled picture gets "ridges"
- CR29927 WHQL PC99 DCT 200: D3D failed in Overdraw/underdraw on 32-bit memory access board
- CR29954 DISPLAY TYPE, BIOS INFO: S3 8.xx.xx, N9 BIOS version (4.12.10) is mis-reported as 2.1D.07 (S3 version string) on N9 cards. This is related to CR29935, and the miscommunication between BIOS and driver's MultiMonitor support code.

Microsoft bug #392666. DX7 SDK Stencil Depth application shows as a black screen when Show Depth Complexity is selected.

Although the driver passes the DCT250.4 PC99 Texture Sizes test, it fails the DCT250.5 Texture Sizes test. The DCT250.5 Texture Sizes test was received the day of the release and the failures could not be addressed in time.

Driver Release History

This table lists information on past Win2000 Savage4 driver releases.

Version	Purpose of release
5.12.01.8000-8.30.14 12/21/1999	<ul style="list-style-type: none"> This version supersedes version 5.01.8.30.13. This is a tip source build. This version uses the WHQL-required DirectX prefix version (5.12.01.8000), to indicate that the driver supports Win2000 DirectX 7.0 support. The internal S3 version number, 8.30.14, can still be viewed using the Display Properties Driver Details option. This driver uses S3 names for the binaries, and an S3-specific S3SAVAGE4 service name for registry key settings. The S3 names are used to distinguish an S3-produced driver from a Microsoft in-the-box driver, so that upgrades of one do not overwrite the files of the other. The .CAT file (Win2000 Catalog file) is included in this release, and is named in the .INF via the CatalogFile directive. Microsoft WHQL is now requesting this file again. No Clarify report. A customer reported failures in the DVD99 testing. This driver fixes failures in DVD99 DISPLAY tests Flip Lock Delay and Flip. CR32625: Savage4 W2K driver 8.30.13 does not follow the Microsoft version numbering scheme. Fixed.
5.01.8.30.13 11/23/1999	<ul style="list-style-type: none"> This version supersedes version 5.01.8.30.12. This is a build based on the 8.30.12 label, with the addition of tip files from the display driver's GX3 directory, which were inadvertently omitted from the 8.30.12 label (and the wrong versions were used in building the 8.30.12 display driver). Other than these files, and the updating of version information, this driver is identical to the 8.30.12 driver. This driver uses S3 names for the binaries, and an S3-specific S3SAVAGE4 service name for registry key settings. The S3 names are used to distinguish an S3-produced driver from a Microsoft in-the-box driver, so that upgrades of one do not overwrite the files of the other. The .CAT file (Win2000 Catalog file) is omitted from this release. Microsoft has requested that we no longer include this file in our .INF file and installation disk contents. There were no bugfixes in this release, except that certain fixes that were named in the 8.30.12 release letter may not actually have been present in that driver (inadvertently omitted to a label/build problem), but should be present in this driver. Please refer to the 8.30.12 release letter for bugs fixed, etc.
<u>5.01.8.30.12</u> 11/18/99	<ul style="list-style-type: none"> This version superseded version 5.01.8.30.11. This was a tip build. [NOTE: after release of the driver, a build problem was identified – some incorrect versions of files, those in the display driver's GX3 directory, were used to build the driver] This driver uses S3 names for the binaries, and an S3-specific S3SAVAGE4 service name for registry key settings. The S3 names are used to distinguish an S3-produced driver from a Microsoft in-the-box driver, so that upgrades of one do not overwrite the files of the other.

	<ul style="list-style-type: none"> • This is the first release of an ICD driver with a DX7 D3D-enabled Win2000 Savage4 driver. In a sense, then, this version also supersedes version 5.01.8.24.02, which was the last (and only) Win2000 Savage4 release that included ICD support. • Various ICD problems found in the 8.24.02 release are addressed in this release: please retest the problems opened against that release (CR30128, CR30129, CR30130, etc.). • CR31878: MultiMonitor: PCI secondary display resolution cannot switch up to 12x10 if color bit is 16bit or 32bit. Fixed. • CR31928: [Customer specific configuration]: When both CRT and flat panel conSome systems:ted, only flat panel will show up in Win2000. Fixed. • CR32181. Savage4 LT PCI [specific customer configuration]: blocky pixel drops appear along the title bar of any window when dragged. Worst: 16bpp. Workaround implemented. • CR32385: DCT250.5 D3D Texture Color Key failures. Fixed. <p>Get Win2000 Macrovision interface working.</p> <p>Fix a Macrovision issue with PAL format TV.</p> <ul style="list-style-type: none"> • Add a hardware problem workaround for PCI Savage4 products: set MM850C bit 16 to 1. <p>Fix mode pruning when a TV is conSome systems:ted/enabled, so that TV panning is not required.</p> <p>Fix PAL TV 800x600 mode support (related to mode pruning fix).</p> <ul style="list-style-type: none"> • Adjust Macrovision burst start time and burst end time for NTSC mode. • Swap high and middle tables for NTSC 6x4 and align the new resulting middle table for center. • CR30152 • CR30087
--	---

<p>5.01.830.0011 10/22/1999</p>	<ul style="list-style-type: none"> • Microsoft 416842: S3SAVAGE4: MINI: Locks up in guimode trying to load savage4 miniport from VGA. This has not been reproduced at S3 on-site, but this driver incorporates a fix that Microsoft made to prevent the problem (GetEdid information cached at S3Initialize time used at pre-first-modeset GetChildDescriptor). • Fixed system hang problem while running Exclusive Mode Playback in WHQL DVD Test Kit. Fix was in MCS3SURF.C. • A problem with 12x10 panels and Savage4 has been fixed, see CR30017 for NT4. • similar to CR29178. Microsoft-reported problem, but Microsoft bug number unknown. A pointer problem on a specific customer's scalable flat panel all-in-one configuration (using older video BIOS, x.xC.xx series) has been resolved. The problem would occur when switching to 800x600x8 from a higher color-depth mode. • This driver incorporates some fixes made by Microsoft for resume-from-hibernation problems. Also some more registers are being saved/restored at S3Get/SetPostRegs time, to improve hibernating to 800x600x8 from a higher color-depth mode. • This driver incorporates some fixes made by Microsoft for resume-from-hibernation problems. Also some more registers are being saved/restored at S3Get/SetPostRegs time, to improve hibernatut please try to reproduce then check if this driver fixes it. There are two fixes in this release (CR60 SDCLK skew patch and 143 Mhz patch) that might resolve this problem. • CR30016: DX7 SDK D3DX Tentacle cause system hang when turn right/left/up/down when Mclk=143. Fixed. • CR30418: WinBench 99 Version 1.1 "DirectDraw Tests" hang with Rev.D MClk=143 board. Not yet verified, but please retest as this problem is probably fixed by this release. • CR30034: DirectX 7SDK Samples 'Bend' hangs on build 2105 after few seconds. Not verified on build 2105, but this release includes a CR60 patch of SDCLK skew which may fix this problem. Please retest. • CR29339. MultiMonitor: SimCity 3000 text under desktop icons corrupted on one display screen if run game demo on the other monitor screen • CR30943: Multi-Monitor: Running Babycha Avi and Dirloop together causes system to hang.is problem. Please retest. • Running Babycha Avi and 3DFlipcube causes discoloration • CR31104: MULTIMON hung at Windows bootup screen after installed drivers in certain systems. • CR31106: Multi-Monitor: When running Babycha Avi and Dirloop together causes corruption on Secondary monitor.
<p>5.01.8.30.0010 10/13/1999</p>	<ul style="list-style-type: none"> • This version superseded versions 5.01.8.30.08 (tip build) and 5.01.8.30.09 (special 8.30.06-derivative built only for Microsoft as an in-the-box candidate). • Microsoft bug 40933. Fixed. New Morph binary (morph.exe dated 9/18/1999) causes Page Fault when run with script BUG40933.SCR. Driver is now correctly communicating between DirectDraw and Direct3D data structures so that when a DirectDraw surface is lost, the Direct3D texture code does not continue to try to use the surface. • CR26461. LPB Bilinear Downscaling bug. Workaround for HW bug in MS1 videoport bilinear horizontal downscaling. Note that report status has not been updated to Fix Implemented because there are some potential negative side effects with this fix: it can potentially mess up a video image captured by a video capture application.

<p>5.01.830.0009 10/08/1999</p>	<ul style="list-style-type: none"> This was an 8.30.06-based release for Microsoft only. It included one bugfix: a fix for a particular Morph testcase failure.
<p>5.01.830.0008 10/06/1999</p>	<ul style="list-style-type: none"> This was a tip build with MultiMonitor disabled, produced as a Win2000 RC3 in-the-box candidate for Microsoft. The S3SAV4.INF installation file included in this release was tailored for Microsoft in-the-box candidates. The binaries are named with the Microsoft names (S3SAV4.DLL and S3SAV4M.SYS), and the registry key for the main driver changed from S3INC to S3SAVAGE4M. (Note: driver releases intended for S3 customers or for S3 generic WHQL certification will use a different registry key, S3SAVAGE4, and different binary names (S3SAVG4.DLL and S3SAVG4M.SYS). CR28812, CR29926. WHQL PC99 DCT250 – PC99 failed PC99#31 Texture Sizes. Fixed. Note that this test should now run correctly with either DCT250.4 (already fixed in 8.30.02) or DCT250.5. The fix should also be included in the next release of the 8.24.xx driver stream (may be best to open a separate report to track the fix in that driver stream. The 8.3x.xx and 8.24.xx driver streams should be tracked separately). CR29966. WHQL DCT250: D3D failed TextureStage tests. Fixed. CR29601 and MS 386670D. Artifacts on Savage4 during HW DVD playback. Fixed. Part of MS 386670D. The fix for Savage4 Split-n-Freeze bug for tiny vertical size of DirectShow window in HW DVD playback has been somewhat revised, and should be re-tested. See Driver Release History entry for 8.30.07. Microsoft reported a trap problem with a version of Morph (invalid parameter test) that is not yet formally released (it will be in DCT300). We received a copy of the test, and this driver fixes the particular problem that was reported. CR27798: DX Samples Light's on-window display was moved to second D3D sample. NOTE: Win2000 builds past 2135 (e.g. 2141) allow for addresses to change at DdLock time. That will fix CR27798. This driver contains a workaround for a PNP installation hang that was seen at Microsoft and at S3. The problem was happening because of a conflict of the S3 driver and VGA driver: VGA driver was using some registers (sequencer registers, it seems) for drawing at the same time as the S3 driver was using them within GetChildDescriptor/GetEdid.

<p>5.01.830.0007 9/29/1999</p>	<ul style="list-style-type: none"> • 5.01.8.30.07 superseded version 5.01.8.30.06. • The purpose of this release was to re-enable MultiMonitor support so that S3 Software Quality Assurance could verify some bugfixes. The release also included some DX7 bugfixes. • DCT250.5 PC99 Texture Size test has many failures. <u>Partial</u> fix. A few remaining failure cases are yet to be resolved. • LPB (Video) fix for MS1 "split and freeze" bug that happens during DVD/VPE playback tiny vertical sizes of DirectShow window. Bug used to show up intermittently during DVD VPE playback while changing the vertical size of the DirectShow window to a value close to zero and then back again. This is part of Microsoft's 386670 D bug. The fix is a workaround for a suspected VPE API bug. • CR30952: [Specific customer] Savage4 board gave PAGE_FAULT_IN_NONPAGED_AREA during installation when Savage4 is Secondary. We disabled (for this customer only) secondary adapter support. • CR30910: MULTIMON give PAGED_FAULT_IN_NONPAGED_AREA Blue screen trap during installation when Savage4 is Secondary and Millenium as Primary. Fixed. • CR31104: MULTIMON hung at Windows bootup screen after install drivers in certain systems. Fixed for some systems, please try if any other systems also failed. • CR27346. DX6.1 D3DIM samples – MFCtexture: the texture on the wall disappears no texture display. SQA has closed this as fixed, since the driver (and the Win2000 O.S.) now only supports DX7, and this problem cannot be reproduced using the DX7 version of the application. Also, the DX6 MFCtexture application behavior described in CR27346 was always suspected to be an application issue anyway. • CR29464. 3D Flipcube: No texture when switch mode to 11x8x32(8MB). SQA has closed this as fixed. It is not fixed in this 8.30.07 release, but was fixed some time ago and it has only recently been confirmed that this problem is gone.
<p>5.01.830.04 9/13/1999</p>	<ul style="list-style-type: none"> • CR29947: WHQL DCT250 - D3D failed Overdraw/Underdraw. Fixed. • CR29966: WHQL DCT250 : D3D failed TextureStage tests. Partially fixed. • This release fixes the following DCT250.4 tests that failed in 8.30.03 and were regressions (relative to the 8.30.02 release): <ul style="list-style-type: none"> • PC99 #27 RGB Rasterization • PC99 #27 Specular • Direct3D Mesh (TL Vertex) • Direct3D Mesh (L Vertex) • Dither – TRUE/FALSE • Alpha Blending – FALSE/TRUE • Shading – Flat/Gouraud

5.01.830.0003

9/08/1999

- 8.30.03 succeeded the 5.01.8.30.02 release and primarily fixed bugs in the DX7 D3D support.
- Some global variables in the miniport were moved to their proper place within the hardware device extension.
- **CRXXXXX** Change Request, but may be Microsoft bug 386670 D shaking video problem. Savage4 VPE horizontal cropping problem on the right side of DirectShow window. Fixed.
- **CR29966** fixed some of the failing testcases of (WHQL DCT250 : D3D failed TextureStage tests). Partial fix.
- **CR29925**: WHQL PC99 DCT250 - PC99 failed PC99#29 Multi Texturing. This has been resolved as a test application problem. Resolved.
- **CR29935**: INSTALL on some systems/N9 BIOS: S3 8.23.xx, Page_Fault bluescreen occurs at boot-up. This was due to a problem with the interface between some BIOS and driver MultiMonitor support. Fixed in driver.
- **CR29490**. Using some boards, System hangs when loading windows after installing latest driver 8.23.14. Believed to be the same issue as CR29935. Fixed.
- **CR29956**: WHQL DCT250 - D3D Failed all Compressed Texture - DXT1, DXT2, DXT3, DXT4 and DXT5. There is an incident ID for DXT1, and a test error is suspected for the failures in DXT2 – DXT5 (test developer is investigating). Believed resolved, but pending final confirmation from MS developer on DXT2 – DXT5 failing testcases.
- **CR29990**. WHQL DCT250: Win2K GDI failed GUIMAN WinGDI(gmvideo3). Resolved as a test error. New tests sent down from Microsoft resolve this issue that was seen with DCT250.3.

<p>5.01.830.0002 9/03/1999</p>	<ul style="list-style-type: none"> • 8.30.02 succeeded the 8.30.01 release and provided bug fixes for DX7 D3D support. • CR29926. WHQL PC99 DCT250 – PC99 failed PC99#31 Texture Sizes. Fixed. • CR29946: WHQL DCT 250 - D3D failed Texture Gradient 8x8 and 16x16. Fixed. • CR29951. WHQL DCT250 – D3D failed TextureFilter – NearestNearest and LinearMipNearest. Fixed. • CR29953. WHQL DCT250 - D3D Failed All Texture Blends - Decal, DecalAlpha, ModulateAlpha, Copy and Add. Fixed. • CR29955. WHQL DCT250 - D3D failed Texture Formats – Compare. Fixed. • CR29961. WHQL DCT250: Run AGP D3D Texture 1024x1024 gave KMODE_EXCEPTION_NOT_HANDLED blue screen trap. Fixed. • CR29967: WHQL DCT250 - D3D failed DX6: Texture Filter - Nearest Nearest and LinearMipNearest. • CR29968. WHQL DCT250 - D3D Failed All DX6 Texture Blends - Decal, DecalAlpha, ModulateAlpha, Copy and Add. Fixed. • CR29969. WHQL DCT250: D3D failed DX6 Stencil tests. Fixed. • CR29978. WHQL DCT250: Direct Draw failed VPE and Kernel test. Fixed. • CR30015. DX7 SDK D3DX Samples (Gravity, Particle, Sprite, and Tentacle): Missing texture when maximized. Fixed. • CR30036. WHQL DCT250: Failed All PCI tests. Resolved as a test issue. Per notes added to report: WHQL and MS Test dev has acknowledged a test bug, such that our PCI PM 1.0-compliant AGP devices are incorrectly failing these tests. We may need some additional assurance (waiver or incident ID) to finalize resolution. • CR30050. WHQL DCT250: D3D TextureStage tests gave blue screen trap. Fixed. • CRXXXX report. Microsoft bug #392683. DX7 SDK DDOverlay application displays only color key when first launched (corrects itself once the window is resized larger). This has been resolved as an app limitation. Savage4 hardware does not support downscaling of RGB overlays. When this DDOverlay app first launches (before you size it larger), it is of a size that requires downscaling. The driver returns an error message to indicate its inability to display the overlay (at that size), but the application does not handle the error code well – it just continues to display color key. Microsoft has confirmed that this is an app limitation and that this will not pose a problem for our WHQL certification.
<p>5.01-8.30.01 (8/26/99)</p>	<ul style="list-style-type: none"> • CRxxxxx. Microsoft bug 392664. DX7 SDK ShadowVol2 application did not draw correctly. Fixed. • CRxxxxx. Microsoft bug 392670. DX7 SDK D3DX applications (Particle, Tentacle, TrivFS, etc.) cause blue-screen trap. Fixed. • CRxxxxx.. Microsoft bug 392876. DCT: BetaPreview test StateBlocks hangs in S3Sav4!DrawTriangleIndexed2_Solid. Fixed. • CR29965: WHQL DCT250: D3D failed Stencil tests. Fixed. This is Microsoft bug 392994. • CRxxxxx. A problem with D3 Sleep state and Win2000 Savage4 rev C is resolved by updating the driver to report (in GetPowerState) no support for this power management state. Rev D does not have the problem, and if a rev D product is present, the driver will report support for D3 Sleep. • CRxxxxx.. A problem with text glyph expansion was corrected, based on input that it might be the cause of some command FIFO hangs

	<ul style="list-style-type: none"> during stress testing. CRxxxxx.. IOCTL_VIDEO_SHARE_VIDEO_MEMORY updated to signal 0 return data in the event that a VideoPortMapMemory request fails. This may correct some problems in low memory configurations. CRxxxxx. A memory size mask has been corrected in the BIOS post emulation code. This may correct problems in power management situations (e.g. resume from hibernation) on Savage4 boards with 4, 12, or 32 MB memory.
5.01.824.0001 8/23/1999	<ul style="list-style-type: none"> Initial DX7 support. CR29600: Quadrant HWDVD: playback scrambles, jitters, macroblocks, gets blocky when downscles, upscaled. This CR fix was not listed in the 8.24.01 release letter, but the problem was verified as fixed by the 8.24.01 release.
5.01.823.0015 8/18/1999	<ul style="list-style-type: none"> CR26747. Rev C only, Win2K 8.20.11: 3D Flower Box Screen Saver hang in 640x480x256 with Hand2 mouse cursor. Fixed by hardware workaround. This was due to a hardware issue: byte-wide accesses of FB cause hang on rev C if 3D4 index register set to 0x58. CR27982. Rev C Only, 3D Flower Screen Saver hang on Preview when AVI play in the background at 8x6x8bpp or 6x4x8bpp. Fixed by hardware workaround. This was due to a hardware issue: byte-wide accesses of FB cause hang on rev C if 3D4 index register set to 0x58. CR28995. Rev. C: 2DFlipCube hang when avi and dirloop in background. Fixed by hardware workaround. This was due to a hardware issue: byte-wide accesses of FB cause hang on rev C if 3D4 index register set to 0x58. CR29462. WHQL PC99 DCT200 - DUAL CPU failed all PCI tests. Resolved. This has been confirmed as an O.S. problem, but will require verification as fixed on a newer version of Win2000 before CR can be closed. See CR29462 Notes section for details. CR29495. WHQL PC99 DCT200 - D3D failed Overdraw/Underdraw test In Win2000 build 2072. Resolved. This has been confirmed as an O.S. problem. See CR29495 Notes section for details.
5.01.823.0014 8/2/1999	<ul style="list-style-type: none"> Disable anisotropic filtering to fix DCT200 failure.
5.01.823.0013 7/21/1999	<ul style="list-style-type: none"> 8BPP S3TC support added. S3TC AGP textures now supported. CR28119. DCT98 V200: AGP - D3D texture 8x8 ,1024x1024 Fail and rerun will cause blue screen.. CR28146. DCT98 V200: System hang when Select All-Auto Run. The hang was occurring in one of the Beta Preview tests (Bit-Exotic). It appears to be fixed by this 8.23.13 release by the fact that the driver now rejects 24bpp texture surfaces. [Note: that the problem was fixed was not discovered until after the release letter was issued, so you will not see this listed as fixed in the 8.23.13 release letter]. CR28413. WHQL PC99 DCT200 - PCI Dual CPU failed ALL PCI tests. Resolved. On dual CPU systems, the PCI Interrupt Line register is being reported as unreadable. Microsoft has confirmed that this is a test error and has issued an incident ID that is valid for DCT200 only (they expect to fix the problem in future DCT releases). The incident ID is 244. CR28806. DX6.1 D3DIM Samples- Compress, texture3 missing at 16x12x16(8MB board only). Fixed by addition of 8bpp S3TC support.
5.01.823.0012 7/14/1999	<ul style="list-style-type: none"> The MultiMonitor support has changed somewhat in this driver. The driver now detects whether it is primary (as set by default PCI/AGP precedence or by CMOS option selection) and if is, uses normal BIOS

	<p>calls, BIOS-reported mode table, etc. If the driver detects that its device is the secondary adapter, then it uses no BIOS calls but uses hardcoded mode tables.</p> <ul style="list-style-type: none"> • Additional modes are now supported in the MultiMonitor-SecondaryDevice configuration. See Resolutions Supported section. • Some minor modifications to the .INF file were made. The S3 generic PCI ID lines were removed from the customer-specific .INF files. • CR28281. Star Wars Episode 1: No fog appears in the game. Improved, but not completely fixed. Improvement fix(a hardware workaround) requires that a game-specific patch be enabled. To enable the patch, one must install the GamesFlags2 DWORD registry value, and set the data to 0x01. Note that this issue is also listed under Unresolved issues, and will continue to be listed there until confirmed entirely fixed. • CR28449. WHQL PC99 DCT200 – Direct3D W Compare – LessEqual failed. • CR28450. WHQL PC99 DCT200 – Direct3D Compressed Texture – DXT1 failed. Believed to be covered by incident ID #210.
<p><u>5.01.823.0011</u> 7/07/1999</p>	<ul style="list-style-type: none"> • This version adds new feature of MultiMonitor support based on 8.23.01. The version number is 8.23.11 to indicate the addition of new feature. • CR26760. Multi Monitors: Savage4 doesn't work as secondary display.
<p><u>5.01.823.0001</u> 7/07/1999</p>	<ul style="list-style-type: none"> • CR27773. Unavailable Bios Information in Display Properties. Fixed. Please test to make sure information displays correctly on an Asian version of Win2000 (verify no Unicode issues with the text string created for BIOS version). • CR28043. S3Swth2 1.00.11 in Win2K, switch on TV to PAL mode, reboot then switch TV back on, CRT goes almost black, TV flickers badly. Fixed. • CR28303: Microsoft BaseBall 3D: The color key appears incorrect, and there is serious flickering and screen refresh problems. Some, but not all, of the issues are fixed in this 8.23.01 release. The purple boxes colorkey issue should be fixed. Release 8.22.09 should have fixed the main flickering issue. Other problems still remain. • CR28332: Win2K Beta 3 (Build 2031)-DCTv.200: Manual DDC Test FAILURE. Resolved as no bug, but a DCT200 limitation. 6/29/1999 confirmation from MS: I heard from WHQL that "this test doesn't work under Win2K", so we're not required to pass it. • CR28435. WHQL PC99 DCT200 - PC99 #27 RGB Rasterization, required capability not detected. This and CR28436 are essentially the same problem. We do not have SRCCOLOR and INVSRCOLOR source blend capability on Savage4. MS has confirmed that SRCCOLOR and INVSRCOLOR have been reduced in importance from Required to Recommended. This, then, will be a No-Fix, with no waiver required. • CR28436. WHQL PC99 DCT200 - PC99 #27.3 Source Alpha Blending Capabilities, required capability not detected. This and CR28435 are essentially the same problem. We do not have SRCCOLOR and INVSRCOLOR source blend capability on Savage4. MS has confirmed that SRCCOLOR and INVSRCOLOR have been reduced in importance from Required to Recommended. This, then, will be a No-Fix, with no waiver required. • CR28446. WHQL PC99 DCT200 – Direct3D Texture Gradient 8x8 and 16x16 test failed. Fixed. • CR28447. WHQL PC99 DCT200 – Direct3D Texture Filter – LinearMipNearest and LinearMipLinear tests failed. Fixed.

	<ul style="list-style-type: none"> • CR28448. WHQL PC99 DCT200 – Direct3D Texture Blend – Modulate test failed. Fixed. • CR28452. WHQL PC99 DCT200 – Direct3D Table Fog – failed Linear, Exponential and Exponential Squared tests. Fixed. • CR28454. WHQL PC99 DCT200 – Direct3D: W Fog – failed Linear, Exponential and Exponential Squared tests. Fixed. • CR28460: WHQL DCT150: Manual DDC Test FAILURE. Resolved as no bug, but a DCT limitation. 6/29/1999 confirmation from MS: I heard from WHQL that "this test doesn't work under Win2K", so we're not required to pass it. • CR27786 DirectX Game, Diablo, during setup become transparent with background. SQA closed this report as an application issue. • CR28224. 2D game: Caesars III: Bitmap does not appear on Autorun. SQA closed this report as duplicate.
<p>5.01.822.0009 6/22/1999</p>	<ul style="list-style-type: none"> • Add customer-specific .INF files. • CR28184. FIFO noise appears when selecting between applications in Add/Remove Program window. Partially fixed by identifying Savage4 via PCI subsystem vendor ID of 1033, and applying CR79 engine timeout tweaks for special case handling of 1024x768x32, 1152x864x32, 1280x1024x32, and 1600x1200x32. Additional fixes may be needed, and the cases should be identified separately for (in case there are any differences due to different MCLK, different memory chip types, etc.). • CR28219. SimCity3000 flickers when run game. Fixed. The fix should fix similar problems on other applications. • CR28228. Star Wars Phantom Menace main menu flickers. This should be fixed by the fix for CR28219. • CR28238. A number of DX6 D3DIM apps have broken (missing geometry): Tunnel, Lights, Fog, etc. This problem introduced in 8.22.07 is fixed in 8.22.09.
<p>5.01.822.0008 6/21/1999</p>	<ul style="list-style-type: none"> • CR27476. 3D WinBench99: Error message when running 3D Quality 4 Zbuffer. Fixed. • CR27610. DCT v150 WHQL Manual test, Invalid Parameter Test for Primary cause KMODE_EXCEPTION_NOT_HANDLED blue screen hang. The fix is slightly enhanced since its first release in the 8.22.07 release. It has been enhanced to more thoroughly check state values passed to D3DRENDERSTATES. • CR27954. 3D WinBench 99 ver 1.2 Quality Test: Corruption on Text Image. Fixed. • CR28067. 3D WinBench99 v1.2 Quality Test cause blue screen trap. S3Sav4.DLL may be at fault. Fixed.
<p>5.01.822.0007 6/16/1999</p>	<ul style="list-style-type: none"> • CR27610. DCT v150 WHQL Manual test, Invalid Parameter Test for Primary cause KMODE_EXCEPTION_NOT_HANDLED blue screen hang. Re-opened (erroneously reported fixed in 8.22.04). Fixed.
<p>5.01.822.0006 6/9/1999</p>	<ul style="list-style-type: none"> • Flat panel support added. • Use Savage4 ALT_STATUS_WORD_0 for engine/FIFO busy status, rather than reading this information from STATUS_WORD_0 (this change was made based on a recommendation of the hardware group). • CR26094. DCT v150, build 1988/2000.3:8.20.09 Failed PC 98 test #25 and #27. Fixed 2K by 2K texture bug on 8MB boards (failure on 16MB boards was fixed in 8.22.05). When the texture is too big for adapter memory, driver will convert to use AGP texture (overflow to system memory). • CR27955. DX6.1 D3DIM-Bend: System hangs when switching between D3D HAL and Software Rasterizer at high res. Fixed. • CR27757. DCT150: DCT150: Win2000 GDI- GUIr Fonts Fail. Fixed.

	<ul style="list-style-type: none"> • CR27789. Dx6.1: D3DIM Samples Bend, the banana is white at 12x10x16(8MB board only). A code change for this Savage3D problem should also fix the problem on Savage4 8MB (Savage4 LT) boards. SQA please verify. • CR27784. DX6.1: D3DIM Samples Bend, the banana is white at 12x10x16 (8MB board only). This should be fixed by the fix for CR26094 case #27 (overflow to AGP memory). • CR27798. DX6.1 D3D Samples Lights' on-window display was moved to second D3D Sample. This problem appears to be application misbehavior. Please verify (can cross-test using Reference Rasterizer, competitors' hardware, etc.). • CR27833. DCT v150 Direct3D failed all MultiTexture tests. All of these failures are DX_OK failures (at least on the 16MB board tested) and can thus be covered by incident ID 141. • CR26855. DCT v150 build 2000.3: 8.20.11 Failed Win2000 GDI(GDIMAN General StretchBlit(gdmvb1) and 8bpp(gdimv8b1), Gradient Fill, Unalign,) tests. This is believed to be a test error (as is the same problem reported against Savage3D in #27369). Even when a GDI-punt driver was used, the same failures were observed. Waiver 221 should cover it. • CR27834. DCT v150 Direct3D failed Compressed Texture tests. Incident id #210 should cover this. • CR27958. Savage4: Mediamatics DVD with Win2000 - playing title causes mouse pointer to blink on and off. Closed as not a bug, but a limitation on an 8MB board. • CR27974. Savage4: Mediamatics DVD with Win2000 - Drops frames during playback. Closed as a not a bug, but a limitation on an 8MB board. • CR27979. Savage4: Mediamatics DVD with Win2000 - Not using Motion Comp. Closed as not a bug, but a limitation on an 8MB board. • CR27994. Savage4 not detecting monitor type when installing driver. Always set as Default Monitor. Resolved as user/configuration error. EDID retrieval (DDC detection) on Savage4 is working okay.
<p>5.01.822.0005 6/2/1999</p>	<ul style="list-style-type: none"> • Savage4 rev A – C hardware problem workaround code now check for revs A – C, so that workarounds will not be applied to rev D. This should allow easier verification of hardware fixes in rev D. • Savage4 rev A – C hardware workaround: CR79 (2D-engine timeout) programming modified to match the logic currently used by the NT 4.0 Savage4 driver. • AGP texture support added. • TV out support added. • CR26094. DCT v150, build 1988/2000.3:8.20.09 Failed PC 98 test #25 and #27. Fixed 2K by 2K texture bug (on 16MB boards) plus instance ID's. • CR26508. Winbench99, Direct Draw test – CPU overclock. This should be fixed by the fix for Win2000 Savage3D like-titled report CR26509. The two drivers share the code in which the fix was made, so it fixed both problems. SQA verified and closed CR26508. • CR27034. DDRAW- DCTv.150 DUAL CPU: 8.21.04, SPECIAL_POOL_DETECTED_MEM_CORRUPTION, bluescreen trap. Resolved (no driver fix). The root problem is actually a WIN32K.SYS trap (SPECIAL_POOL_DETECTED_MEM_CORRUPTION appears to only occur as a blue-screen trap on reboot after a previous session trapped with the WIN32K.SYS may be at fault blue-screen trap. The WIN32K.SYS problem is fixed in Win2000 build 2039; SQA verified on both single and dual CPU systems.

	<ul style="list-style-type: none"> • CR27325. DCT v150 Win2K build 2031 8.22.01: System low in virtual memory when run All DCT tests. Resolved as system configuration problem: need 256M system. • CR27478. WHQL DCT98(Ver.150) PC98 test: PC98 #24 ,26,28 required capability not detected we have instance ID's for them. • CR27489: DX6.1 – Run AVI and two D3DIM Samples – shadow volume2 and bend cause blue screen. This has been fixed. • CR27832 DCT Direct3D failed Texture Filter – LinearMipNearest and Texture Filter – LinearMipLinear is fixed. • CR27326. Miscellaneous DCT150 failures. This was closed by SQA, and a few of the remaining failures were opened as separate,: Texture Filter tests (see CR27832, fixed by 8.22.05), Multitexture Tests (see CR 27833), Compressed Texture (see CR 27834).
<p>5.01.822.0004 5/26/1999</p>	<ul style="list-style-type: none"> • CR27284 fixed. Fixed screen corruption while playing video problem. • CR27597 fixed. Fixed 1600x1200x32 3D Flipcube hang problem. • CR27610 fixed. Fixed DCT Invalid Parameter Test hang problem. [NOTE: this was erroneously reported as fixed. Problem reopened in 8.22.05-06 timeframe). • Change driver name to be Savage4 specific.
<p>5.01.822.0003 5/19/1999</p>	<ul style="list-style-type: none"> • Internal iDriverVersion (returned at DrvEnableDriver time) changed to return DDI_DRIVER_VERSION_NT5 instead of GDI_DRIVER_VERSION. According to a comment in the Win2000 DDK include file WINDDI.H, it seems that GDI_DRIVER_VERSION would imply this was an NT 4.0 driver. • S3Gamma support logic updated. • The miniport driver no longer imports any functions from HAL or NTOSKRNL DLLs. This change is made to comply with a new Win2000 WHQL requirement; these functions are considered illegal for Win2000 drivers. Some of these illegal functions have been replaced with new Win2000 functions. This should not impact driver performance, stability, memory usage, etc... but it could. • 4 BPP S3TC support has been added • CR26456, CR26405 (same issue). Title: Full screen dirloop stop looping when AVI is playing in the background. When an AVI clip playing in the background completes, DOS DIR loop running in DOS full-screen session halts. Resolution: fixed. • CR27326 (partial fix). Miscellaneous DCT 150 test failures. Alpha Blend tests now pass. S3TC 4BPP support may fix part of Compressed Texture portion of test. • CR27329: No compressed texture displayed. Resolution: Added 4BPP S3TC support. • CR26609. VPE_Flip DCT test failures fixed. • No CR available. VPE fix for scaling problems while resizing DirectShow window during HW DVD playback. • CR26248. GX3. DCT v160 build 1988: 8.20.09 Corruptions in OverFly Direct Draw. This report has been closed as fixed in 8.21.01. Please verify that it is fixed in this 8.22.03 release as well (different source base). • CR26340. GX3. Monster Truck Madness: While running the game there is polygon dropping. This report has been closed as fixed in 8.21.06. Please verify that it is fixed in this 8.22.03 release as well (different source base). • CR26997. GX3. DCT150: D3D-Texture Gradient 8x8, 1024x1024 fail. This report has been closed as fixed in 8.22.07 [sic – should be 8.21.07]. This should be fixed in this 8.22.03 release as well. • CR27375. GX3. WHQL- D3D Flipcube severe texture corruption on the

	<p>top portion or the cube. This was closed as fixed in 8.21.07. It should be fixed in this release as well.</p> <ul style="list-style-type: none"> • CR27361: GX3. DX6.1 D3DIM samples – Compress no Texture Display. Should be fixed by the addition of 4BPP S3TC support (8BPP S3TC still unsupported).
<p>5.01.822.0002 5/12/1999</p>	<ul style="list-style-type: none"> • Fix handling of textures smaller than one tile (fixes TextureGradient DCT tests) • Fix texture colorkey • Change amount of memory mapped for 8bpp: this fixes the inability to set 8bpp desktop modes • 1280x1024x32bpp modes are now blocked if the refresh rate exceeds 75 Hz, rather than being specifically blocked for 85 Hz or 100 Hz. • 1600x1200x16bpp modes are now blocked if the refresh rate exceeds 75 Hz, rather than being specifically blocked at 85 Hz. • Allow support for 1600x1200x32bpp for Savage4 (still blocked for Savage3D). Please report all noise issues by refresh rate, whether desktop or secondary streams noise. See Resolutions Supported section for details. • Allow support for 1920x1440 resolutions, if supported by the video BIOS. Please report all noise issues – no refresh rates or color depths are blocked for this resolution in this release. • Make use of the MS1 extended Y coordinate range • Fixed CR27233: D3DRM sample missing donut when switching between Point and Linear filter. • CR27326 partially fixed: Fixed: Gradient Texture 8x8, 16x16, 32x32, Texture Colorkey, W compare Greater/Equal, Subpixel Sampling, Texture Perspective, Texture Blend – Modulate. • CR27233: DX6.0 D3DRM samples – Texture mapping V corruption. Fixed. This was not listed in the release notes for 8.22.02, but discovered later.
<p>5.01.822.0001 5/05/1999</p>	<ul style="list-style-type: none"> • Initial release of the Win2000 driver supporting both Savage3D and Savage4 and providing Direct3D support for both.

Resolved Issues

- CRxxxxx Change Request, but may be Microsoft bug 386670 D shaking video problem. Savage4 VPE horizontal cropping problem on the right side of DirectShow window. Fixed. This release fixes some of the failing testcases of CR29966 (WHQL DCT250 : D3D failed TextureStage tests). Partial fix.
- CR29925 WHQL PC99 DCT250 - PC99 failed PC99#29 Multi Texturing. This has been resolved as a test application problem. Resolved.
- CR29935 INSTALL on some systems/N9 BIOS: S3 8.23.xx, Page_Fault bluescreen occurs at boot-up. This was due to a problem with the interface between Number Nine BIOS and driver MultiMonitor support. Fixed in driver.
- CR29490 Using some boards, System hangs when loading windows after installing latest driver 8.23.14. Believed to be the same issue as CR29935. Fixed.
- CR29956 WHQL DCT250 - D3D Failed all Compressed Texture - DXT1, DXT2, DXT3, DXT4 and DXT5. There is an incident ID for DXT1, and a test error is suspected for the failures in DXT2 – DXT5 (test developer is investigating). Believed resolved, but pending final confirmation from MS developer on DXT2 – DXT5 failing testcases.
- CR29990 WHQL DCT250: Win2K GDI failed GUIMAN WinGDI(gmvideo3). Resolved as a test error. New tests sent down from Microsoft resolve this issue that was seen with DCT250.3.

Unresolved Issues

- CR26603 some cards cannot change to VGA 8x6 mode.
- CR26786 Windowed Dirloop does not run smoothly in 10x7x16bpp/256colors.
- CR27346 DX6.1 D3DIM samples- MFCtexture: the texture on the wall disappears no texture display. This appears to be an application bug, that the reference rasterizer and RGB emulation results do not match at 16bpp. Driver behavior appears to be correct.
- CR27500 DCT v150 DUAL Cpu: PC98 hang on Var20:PC98 linear-mapped low-res modes when run all PC98 tests. This problem does not appear on rev D Savage4 boards. No workaround for older boards has yet been found.
- CR27830 8.22.04 Video clips and Speedy cause system hang when leave on for about 1 hour. SQA has verified that this is not fixed in rev D hardware.
- CR27873 On dual CPU, play video clip and move mouse: causes system hang. This problem does not appear on rev D Savage4 boards. No workaround for older boards has yet been found.
- CR27953 3D WinBench99 failed Quality Tests.
- CR28031 DX6.1 D3DIM samples- Compress: Blue screen when switching texture at 12x10x16.
- CR28040 Savage4: Mediamatics DVD with Win2000 - Notice playback when scaling jagged edges appear.
- CR28178 Rev D only: Block of pixel drop along the title bar of video when moves to off screen slowly 16x12x16@60Hz.
- CR28184 FIFO noise appears when selecting between applications in Add/Remove Program Window.
- CR28274 The following games lock up when attempting to launch: Powerslide, Half Life, Shogo.
- CR28275 Baldur's Gate: A DirectDraw error occurs when attempting to load a post-install cinematic. Note, however, that report details that despite this error pop-up, This does not affect gameplay, or the successful completion of the installation.
- CR28276 Close Combat III: If the user attempts to access the scenario editor, immediately after launching the game, the game will exit to desktop.
- CR28278 Caesar III: The game will frequently refuse to enter windowed mode.
- CR28279 Caesar III: The bitmap image is missing from the autorun menu, and fonts are missing from the loading screen boxes during installation.
- CR28281 Star Wars Episode 1: no fog appears in the game. Win9x corresponding problem is CR28041. Fog partially fixed in 8.23.12 driver release, but according to games tester, the fogging effect is not yet thick enough.
- CR28287 Tiger Woods Golf '99: There is a moderate amount of texture flickering in background of playing area.
- CR28292 Tiger Woods: The game will not run properly in any mode above 800x600. report details include note: The same bug occurs with 9x, and also on TNT.
- CR28303 Microsoft BaseBall 3D: The color key appears incorrect, and there is serious flickering and screen refresh problems. Some of the issues described in this report are fixed in the 8.23.01 release, but not all.
- CR28304 Wargasm: After launch, the main menu and all subsequent menus will shake vertically. Behavior improved significantly in 8.23.01 release, and severity was decreased. Still needs additional fixing.
- CR28310 Rev C: Star Wars Phantom Menace: A horizontal pixel-width strip is visible on the main menu. As title has changed to indicate, this is now believed to occur only with Rev C hardware.
- CR28445 WHQL PC99 DCT200 – DirectDraw, Blt- ColorKey – Vmem to Primary test failed. The failing tests are pixel mismatch problems in the portion of the test BLT, SRCKEY (from Vmem) with unused pixel bits set. The problem stems from our not having the ability to limit the bits used for a blt colorkey to anything less than the color depth normally uses. This test is setting alpha bits in 32bpp, but setting the mask for the alpha bits to be ignored – our hardware doesn't know to ignore them. MS is confirming that WHQL will allow failures of this test, although they have

- decided to leave it in the test suite. All that remains is for us to get the appropriate waiver or incident ID.
- CR28461 Rev C only: On DUAL CPU, 3D pipe ScreenSaver causes system hang. This is probably another instance of the problem described in CR27982.
 - CR28749 2D: My Computer icon becomes discolored when accessing CD-ROM applications in all 8-bit modes.
 - CR28787 WHQL PC99 DCT200 - Beta Preview-Cubic Mapping tests (Yaw, Pitch, Mipmapping), required capabilities not detected.
 - CR28789 WHQL PC99 DCT200 - Beta Preview failed PC99#29 Multi Texturing.
 - CR28807 WHQL PC99 DCT200 - Beta Preview-Bump Map Textures test, required capabilities not detected.
 - CR28808 WHQL PC99 DCT200 - Beta Preview-Luminance Textures, required capabilities not detected.
 - CR28809 WHQL PC99 DCT200 - Beta Preview-Lightmap, required capabilities not detected.
 - CR28812 WHQL PC99 DCT200 - Beta Preview failed PC99#31 Texture Sizes.
 - CR28813 WHQL PC99 DCT200 - Beta Preview failed PC99#34 Performance.
 - CR28814 WHQL PC99 DCT200 - Beta Preview failed MipFilter Point - Non-Square Width, NonSquare Height and Full Square tests.
 - CR28949 some boards: Noise when move Advance Display Properties up and down. More severe in high res modes.
 - CR28971 Wargasm: All pre gameplay menu screens will only display in windowed mode
 - CR28974 Star Wars Pod Racer: Background and characters are not drawn properly.
 - CR28981 H/W cursor flashes when running a DDraw app
 - CR28984 Corruption in 3D FlipCube when full screen avi played and full screen dirloop in background. 16x12x32bpp.
 - CR28985 Noise in 3D FlipCube in 16x12x32bpp. 16MB and 32MB boards only.
 - CR29025 DFP & CRT Displays: 8.16.04, display is forced into VGA mode after a successful installation of the driver if DFP is conSome systems:ted but powered off.
 - CR29045 DFP (Viewsonic150): 8.23.12, DFP does not turn-off when Power Scheme Monitor-Off is set, the display just flickers, happens on systems (revD).
 - CR29093 Some systems:Win2K (Bld 2031): cannot change modes after installing drivers on some boards.
 - CR29136 Background color changed with stream on at 8bpp.
 - CR29149 WHQL PC99 DCT200 - Beta Preview failed Bit-Exotic tests.
 - CR29339 MultiMonitor: SimCity 3000 text under desktop icons corrupted on one display screen if run game demo on the other monitor screen
 - CR29343 SimCity 3000 occasionally missing triangles when run game demo
 - CR29363 Pixel Drop occurs on dos loop command prompt title bar using Savage4 Pro (86C397P) with driver 8.23.13.
 - CR29419 Some systems: Ares (MS1) - Ares Win 2000 #9 AVI corruption in 256 color.
 - CR29455 Pixel drop when drag a window on top of a movie window
 - CR29464 3D Flipcube: No texture when switch mode to 11x8x32(8MB)
 - CR29465 System hang when running both D3DIM Samples Lights and Bend
 - CR29466. 3D WinBench 1.2 3D WinMark blue screen trap when test setting is 10x7x32bpp. 16MB and 32MB boards only.
 - CR29497 Mediamatics: system hang when playing DVD in 1600x1200x32 mode
 - CR29499 Mediamatics: video will not play, application error when playing in 11x8, 12x10, 32bpp modes
 - CR29501 Mediamatics: loss of video/app hang when toggling to full screen command prompt while DVD is playing
 - CR29502 Mediamatics: video is jaggy when downscaled below 50%
 - CR29511 Mediamatics: player is currrupted when explorer is opened in 8bpp modes
 - CR29513 Mediamatics: cannot play mpg2 file aqua_001.mpg
 - CR29596 WHQL DCT200: Win2000 build 2072 hung on Win2000 GDI GUIMAN WinGDI test when run All Auto

CR29600 Quadrant HWDVD: playback scrambles, jitters, macroblocks, gets blocky when downscles, upscaled

CR29601 Quadrant HWDVD: multicolored blocks left behind from pop-up windows on desktop

CR29602 Quadrant HWDVD: subtitles flicker

CR29606 (MS1)- W2K: Video never recovers from the manual standby.

CR29653 Driver version did not update after updated the driver. Particular installation sequence.

CR29734 Rev. E 32 bit only. FIFO noise when move Display Properties box. [12x10x32@60](#)

CR29740 Rev. E 32 bit only. FIFO noise in 3DFLipCube in 12x10x32@60 test modes causes system hung.

CR29744 Rev. E 32 bit only. 2D Flip Cube shakes horizontally when test setting is [12x10x32@60](#)

CR29811 Color corruption in media player when exit 2D FlipCube in 16 and 32 bpp modes with avi running in the background.

CR29815 WHQL PC99 DCT 98 V200- Test Manager hung at BLT_offscreen overlap

CR29822 some Rev C boards: Noise when resize My Computer when avi is open.

CR29924 Quadrant HWDVD: downscaled picture gets "ridges"

CR29927 WHQL PC99 DCT 200: D3D failed in Overdraw/underdraw on 32-bit memory access board

CR29944 WHQL PC99 DCT 250 - Win2K build 2105 Blue screen trap when run All Auto.

CR29947 WHQL DCT250 - D3D failed Overdraw/Underdraw

CR29954 DISPLAY TYPE, BIOS INFO: S3 8.xx.xx, N9 BIOS version (4.12.10) is mis-reported as 2.1D.07 (S3 version string) on N9 cards. This is related to CR29935, and the miscommunication between Number Nine BIOS and driver's MultiMonitor support code.

CR29966 WHQL DCT250 : D3D failed TextureStage tests

CRxxxxx Report. Microsoft bug #392666. DX7 SDK Stencil Depth application shows as a black screen when Show Depth Complexity is selected.

SQA Engineering Release Comments Status as of Date: 01/14/2000

- This version of software product has been in test for less than 48 hours
- Acceptance Status: This driver HAS passed a limited suite of acceptance testing for the following controllers: Savage4 (394/395/396/397 Rev. C and Rev. D)
- Regression Status: Regression of all open fixed issues HAS been completed.

Issues Fix Verified:

CR30680 DirectX7 D3DIM Samples "Bump Waves" Corruption on all mode

CR33145 WHQL DVD Test Tool-Flip Lock Delay Test

CR33147 WHQL DVD Test Tool-Switch Flip Bob Weave Test

CR33148 WHQL DVD Test Tool-Update Overlay Bob Test

CR33149 WHQL DVD Test Tool-Flip Bob Order Test

CR33150 WHQL DVD Test Tool-Flip Multi Surface Test

CR33151 WHQL DVD Test Tool-Flip Test

CR33200 DCT300: Savage4 Win2K fails DX6 D3D Overdraw/Underdraw

CR33201 DCT300 PC99 INF File Check test: Savage4 Win2K .INF files are missing "ExcludeFromSelect" directives

New Issues Found:

CR33649 All Movie Clips Samples in the P:\softest\Movies\MPEG1 folder are extended over the Window Screen on a Flat Panel Monitor. This happens at all Modes

CR33262 DX7 D3DIM Samples: Launching bend and billboard together causes bluescreen when toggling billboard from fullscreen to window screen at any mode.

CR33253 Rubberbanding a Video Clip at mode 10x7x32@85 displays noise.

CR33575 Both CRT and Panel Devices cannot be selected at the same time after de-selecting one of them.

RESOLVED AS DX7, AND APPS PROBLEM:

CR29956 WHQL DCT250 - D3D Failed all Compressed Texture - DXT1, DXT2,DXT3, DXT4 and DXT5 Resolved as testkit error.

ISSUES NOT FIXED:

- CR26786 Windowed Dirloop does not run smoothly in 10x7x16bpp or 256colors.
- CR27798 Dx6.1 D3D Samples Lights' on-window display was moved to second D3D Sample
- CR27830 Rev.C: 8.22.04 Video clips and Speedy cause system hang when left on overnight.
- CR27873 Rev.C Only. On dual CPU, play video clip and move mouse: causes system hang.
- CR27953 3D WinBench99 Failed Quality Tests #10, #29 and 52 when testing mode is set to 10x7x32bpp .
- CR28040 Savage4: Mediamatics DVD with Win2000 - Notice playback when scaling jagged edges appear.
- CR28184 Rev. C. FIFO noise appears when selecting between applications in Add/Remove Program window.
- CR28274 The following games lock up when attempting to launch: Powerslide, Half Life, Shogo
- CR28276 Close Combat III: If the user attempts to access the scenario editor, immediately after launching the game, the game will exit to desktop
- CR28275 Baldur's Gate: A direct draw error occurs when attempting to load a post-install cinematic
- CR28279 Caesar III: The bitmap image is missing from the autorun menu, and fonts are missing from the loading screen boxes, during installation
- CR28281 Star Wars Episode I: No fog appears in the game
- CR28287 Tiger woods Golf '99: There is a moderate amount of texture flickering in background of playing area
- CR28292 Tiger Woods: The game will not run properly in any mode above 800x600
- CR28303 Microsoft BaseBall 3D: The color key appears incorrect, and there is serious flickering and screen refresh problems
- CR28310 Rev. C only. Star Wars Phantom menace: A horizontal pixel-width strip is visible on the main menu
- CR28318 Noise in Winbench99 ver 1.1 Business Graphic Winmark tests in 16x12x32bpp.
- CR28461 Rev. C only: On DUAL Cpu, 3D pipe Screen Saver causes system hang
- CR28749 2D: My Computer icon becomes discolored when accessing CD-ROM applications in all 8-bit modes
- CR28789 WHQL PC99 DCT200 - Beta Preview failed PC99#27 Multi Texturing.
- CR28813 WHQL PC99 DCT200 - Beta Preview failed PC99#34 Performance
- CR28814 WHQL PC99 DCT200 - Beta Preview failed MipFilter Point -Non-Square Width, NonSquare Height and Full Square tests.
- CR28868 WHQL PC99 DCT200 - Beta Preview failed all MipFilter Linear tests -Non-Square Width, NonSquare Height Full Square tests
- CR28910 WHQL PC99 DCT200 - Beta Preview failed MipFilter Linear – MinPoint and MinLinear
- CR28913 WHQL PC99 DCT200 - Beta Preview failed PC99TA 6.8.6 720x568 resolution
- CR28914 WHQL PC99 DCT200 - Beta Preview failed PC99TA 6.8.4 YUV support
- CR28915 WHQL PC99 DCT200 - Beta Preview failed PC99TA 6.8.5 Qual Scaling Cons.
- CR28916 WHQL PC99 DCT200 - Beta Preview failed MipFilter Point - LOD Bias
- CR28919 WHQL PC 99 DCT200 - Beta Preview - PCI Latency Win2000, results inconclusive.
- CR28971 Wargasm: All pre gameplay menu screens will only display in windowed mode
- CR28974 Star Wars Pod Racer: Background and characters are not drawn properly.

CR28984 Corruption in 3D FlipCube when full screen avi played and full screen dirloop in background. 16x12x32bpp.

CR28985 Noise in 3D FlipCube in 16x12x32bpp. 16MB and 32MB boards only.

CR29025 DFP & CRT Displays: 8.23.12, display is forced into VGA mode after a successful installation of the driver if DFP is connected but powered off.

CR29136 Background color changed with stream on at 8bpp

CR29149 WHQL PC99 DCT200 - Beta Preview failed Blt-Exotic tests.

CR29149 WHQL PC99 DCT200 - Beta Preview failed Blt-Exotic tests.

CR29343 SimCity 3000 occasionally missing triangles when run game demo

CR29363 Pixel Drop occurs on dos loop command prompt title bar using Savage4 Pro (86C397P) with driver 8.23.13.

CR29455 Pixel drop when drag a window on top of a movie window

CR29465 System hang when running both D3DIM Samples Lights and Bend when MCIk_3.

CR29466 3D WinBench 1.2 3D WinMark blue screen trap when test setting is 10x7x32bpp. 16MB and 32MB boards only.

CR29490 Using [Specific customer] boards, System hangs when loading windows after installing latest driver. PCI card only.

CR29497 Mediamatics: system hang when playing DVD in 1600x1200x32 mode

CR29499 Mediamatics: video will not play, application error when playing in 11x8, 12x10, 32bpp modes

CR29501 Mediamatics: loss of video/app hang when toggling to full screen command prompt while DVD is playing

CR29502 Mediamatics: video is jaggy when downscaled below 50%

CR29511 Mediamatics: player is corrupted when explorer is opened in 8bpp modes

CR29513 Mediamatics: cannot play mpg2 file aqua_001.mpg

CR29601 Quadrant HWDVD: multicolored blocks left behind from pop-up windows on desktop

CR29602 Quadrant HWDVD: subtitles flicker

CR29653 Driver version didn't update after updated the driver

CR29811 Color corruption in media player when exit 2D FlipCube in 16 and 32 bpp modes with avi running in the background.

CR29822 Rev C boards: Noise when resize My Computer when avi is open.

CR29924 Quadrant HWDVD: downscaled picture gets "ridges"

CR29935 INSTALL on w/BIOS: S3 8.23.xx, Page_Fault bluescreen occurs at boot-up,

CR29954 DISPLAY TYPE, BIOS INFO: S3 8.xx.xx, [Specific customer] BIOS version (4.12.10) is mis-reported as 2.1D.07 (S3 version string) on cards.

CR30029 Tiger Woods 99- locks up on black screen when attempting to launch

CR30031 Baldur's Gate- menu buttons flickering

CR30049 Star Wars Phantom Menace- locks up in gameplay

CR30067 Speedy hang on resolution 1152x864x8 when running speedy and maximize one of the PolySolid windows.

CR30071 In-Box driver, white line fragments appear at desktop at logon or shutdown or during line scrolls at high res modes (16x12,19x14 at 16bpp)

CR30127 Different color appears on the title bar when running speedy on resolution 19x14x16.

CR30230 [Specific customer] boards Rev C only: FIFO noise when move video vertically.

CR30443 GDI/USER inspection Tests corruption and hard hung on "USER/S/Draw FocusRect" test

- CR30671 Savage Xtreme 16MB SGRAM: In-Box 8.23.01 Bld 2105, During OEM HCT 9.2 Sys Stress, Bluescreen Stop: Special_Pool_Detected_Memory_Corruption while verifying only S3Sav4.dll
- CR30680 DirectX7 D3DIM Samples "Bump Waves" Corruption on all mode
- CR30694 Rev. E 32 bit only: Pixel Drop when shaking Display Properties
- CR30756 Shogo- will only display in windowed mode
- CR30889 DX7 D3DIM w/ Bld 2128RC2, MFC Texture Sample: 8.30.05, black blocky w/ gray background corruption's are shown after resuming system from Hibernation, occurs on rev D Sav4 Diamond NEC,S3. TNT2 OK, G200 hangs.
- CR30907 DX7 D3DIM w/ Bld 2128RC2, MFC Texture Sample: 8.30.05, at 32bpp sys hard hangs after resuming from Hibernation, whole screen corruption at 16bpp, occurs on Sav4 Xtreme 16MB SGRAM. TNT2 OK, G200 hangs.
- CR30915 DFP & CRT, Bld 2128RC2: 8.30.05, Mpeg/Avi playback fullscreen only fills at least 25% at top of the screen, the rest is blank, found with Rev D occurs on DFP
- CR30945 Savage4 board gave PAGE_FAULT_IN_NONPAGED_AREA blue screen trap when recovering from Hibernation.
- CR31264 System hung during installation drivers.
- CR31286 TV check box still on when TV is not connected on Win2K
- CR31295 When change the resolution to any of the 8 bit mode, the TV icon disappear on CRT or Panel
- CR31317 HCT ACPI Stress Device I/O occurs error message: driver prevents machine to standy.
- CR31372 Multimon: Blue screen trap KMODE_EXCEPTION_NOT_HANDLED when run 3DFlipCube with avi in Secondary
- CR31386 WHQL DCT250: Direct Draw failed Video Memory Management Tests
- CR31387 System cannot recover if performing HCT ACPI Stress Device I/O and Wake Time tests.

DISPARITIES WITH DEVELOPER'S RELEASE NOTE:

None

SPECIAL INSTRUCTIONS:

None