

ENGINEERING RELEASE NOTE

S3® Savage4™ NT 4.00 Driver Version 8.18.02 (01/13/00)

Recipient

S3

Purpose

Release a driver which fixes a problem where the background is miscolored just after a reboot of the system in 256-color mode when IE5 Active Desktop is enabled

Products Supported

Savage4™/4+ Rev B, Rev C, Rev D

Software Requirements

- Microsoft NT4.00 (service pack 5 is recommended).
- The driver includes DirectX support at the level provided by NT4.00 service pack 5 (sometimes called DirectX 2.5).
- Resolution, color depth, and refresh rate support is dependent on the BIOS used with the driver. The driver will specifically remove support for any color depth other than 8,16, or 32, however.

Applications/Utility Components

The release directory can include NOUTIL and WITHUTIL directories. In this case, WITHUTIL should include the S3SWTCH2 utility released with 8.15.08_NEC, and the S3SAVAG4.INF file in the WITHUTIL directory should be updated to include the install and registry keys required by the utility.

Installation Instructions

Use the standard method for installing NT 4.0 drivers: install from Settings page of ControlPanel/DisplayProperties component. The installation disk for this release should include the following files:

VERSION.TXT
README.TXT
S3SAVAG4.INF
S3MINI.SYS
S3SAVAGE.DLL
S3MICD.DLL

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Additions/Changes

- The 8.18.02 driver is a successor to the 8.18.01 release. Like the 8.18.01 release, it is based not on tip (most recent) Savage4 NT 4.00 source, but is based on the 8.18.01.

Bug Fixes

NT4.00_8.18.02

CR32378 The background is miscolored just after reboot of the system in 256-color mode when IE5 Active Desktop is enabled.

NT4.00_8.18.01

NO CR Fixed a customer-specific issue where an uninitialized value in the DMA TimerBusy variable caused a hang to result on roughly 1 in 10 reboots of the system.

NT4.00_8.17.02

NO CR fixed the GPF caused by the fix of CR31898.

NT4.00_8.17.01

Driver

CR31898 NT4: with Creative DVD-ROM, after calibration, the overlay screen is offset and not centered.

ICD

Same as used in 8.15.08 (not rebuilt)

NT4.00_8.16.06

CR29382 Vlewperf61: Memory error will occur in any 32 bit desktop mode.

CR29453 NT4.0 driver reports 4MB memory for an AIC with a single 2Mx32 memory.

CR26428 Some systems: pointer hot spot does not line-up at 8x6 & 6x4 modes. SW cursor is okay.

CR25930 On DFP butterfly object from the Direct Draw Over fly application is restricted to the upper-left portion of the screen at 800x600 screen resolution desktop modes,

CR28092 BIOS Information indicates it's<UNAVAILABLE> from the Adapter Information section of the Display Properties.

NT4.00_8.16.05

CR26912 In Quake III, launching the game will cause the system to issue a Dr. Watson Exception Violation error.

CR26478 ICD- Quake3 test (3-10): Near mipmaps in xian_dm9 have black bands. (similar to GLQuake problem). Enable tile in mode 1600x1200x32@60.

CR28092 BIOS information indicates it's<UNAVAILABLE> from the Adapter Information section of the Display Properties.

Include the shared miniport code for GX4.

4.00_8.16.04

Fixed the memory management bug for OEM HCT 8.1.

4.00_8.16.03

Added the ROP3 BA support. Also it includes GX4 code.

4.00_8.16.02

CR28344 The system hangs after click Screen Saver tab in Display Properties window under 32bpp.

CR27792 In Winstone 99 benchmark the HighEnd/Microstation test locks-up on systems with only 64MB of RAM.

CR27266 In Winstone 99 benchmark the HighEnd/Microstation test locks-up on systems with only 64MB of RAM.

4.00_8.16.01

Performance driver.

4.00_8.15.03

Performance driver.

4.00_8.15.02

CR27506 FIFO noise showed while WinBench 99 running for some systems.

4.00_8.15.01

Support Savage4 Rev D. Enable hardware cursor on dual CPU system for Rev D. No CR78 adjust for Rev D.

4.00_8.14.04

CR26818 Mouse cursor disappear when move over the running AVI file area.

CR27506 FIFO noise showed while WinBench 99 running.

4.00_8.14.03

DCT 1.50 GDI stress hang up.

Ancient Pathways screen saver hang up.

CR27367 ICD-Screen Saver: System crashes with OpenGL screen savers at 16-bit and 32-bit color depth.

4.00_8.14.02

Go back to use hardware cursor, Use CR78=0 to fix the bits mismatch.

4.00_8.14.01- =ICD

CR26449 If you find any more problems with GLDemo, be sure to test on at least two systems and exactly report the steps necessary to reproduce the problem.

4.00_8.13.02

Extra line for Japanese photo retouch in 16bpp and 32bpp modes and 256 color mode hang problem.

4.00_8.13.01 - ICD

Bug fixes from 8.12.03 did not work. New attempt to fix CR25964, CR26447, CR26448.

CR26449 not yet fixed.

Reserve the last 4K frame buffer for BIOS use.

Fix the GetCurrentScanLine for LCD.

Fix the line draw problem for SGRAM

4.00_8.12.03 - ICD

Fix

CR25964,

CR26449,

CR26447,

CR26448.

4.00_8.12.02

Fix the hang for mode change from any mode to 16x12x8 if panel is on and then turn off.

4.00_8.12.01

CR25962 2D- MODE CHANGE: If S3Switch2 utility is installed, sys hangs if mode change from 10x7x16 to 16x12x8.

4.00_8.11.15

Fix the ICD hang up for WHQL on some systems.

4.00_8.11.14

Fix the hang up for WHQL on some systems.

4.00_8.11.13

Fix the bits mismatch for dynamic hardware/software cursor.

4.00_8.11.12

Use Dynamic hardware/software cursor.

Adjust FIFO parameter for mode 1600x1200x32@60.

4.00_8.11.11

Use software cursor.

CR26468 WHQL 3D TEST (DUAL CPU ONLY): 8.11.10, Dr. Watson conform.exe error, aborting test after 2 hrs. & multiple errors

4.00_8.11.10

Use software cursor and turn off stream for dual CPU system.

4.00_8.11.09

CR25875 2D (MPEG w/ SPEEDY on DUAL CPU): 8.11.04->08, system hard hangs after 30 minutes to 2 hrs, less than 1 minute w/ Dirloop.

CR25954 DDRAW- DUAL CPU (DCTv100): HCT Short or BLT test from Manual/DDraw causes a GPF hang, IRQL_NOT_LESS_OR_EQUAL.

CR25952 2D- DFP- (AMOVIEw/TASK MANAGER): 8.11.06->08, FIFO noise occurs at several modes, CRT is OK.

CR25951 2D- 8.11.06->08, If S3Switch2 util is installed, cursor is mapped & restricted to a 1/2 inch area along top of screen at 10x7x16bpp@60Hz

CR25876 2D- DFP only (FLIPCUBE): 8.11.04->06, blue line noise occurs at 16 & 32bpp modes.

CR25962 2D- MODE CHANGE(DUAL CPU): 8.11.06->08, If S3Switch2 utility is installed, sys hangs if mode change from 10x7x16 to 16x12x8.

CR26066 ICD- Half-Life: No textures on weapons, hands, characters.

CR26067 ICD- Half-Life: Slow performance overall (less than one frame per second)

4.00_8.11.08

CR25504 ACCESSORIES/ ANALOG CLOCK: 8.11.07, second hand is not moving properly, it only moves at 15 second intervals.

CR25860 2D- Run WinBench99 cause system random hang. (Still exist in 8.11.05->07).

CR25953 2D- DUAL CPU PII 300LX(MPEG/AVI): stretching clip causes system to hang at several modes, no stretching required on DUAL PII 450BX sys.

CR25975 DOCUMENTATION - VERSION TEXT: 8.11.07 and all previous, Build date indicates 1998, it should be 99.

CR26054 2D- Speedy:8.11.07, Face does not draw after on-the-fly mode change.

CR26063 ICD- SCREENSAVER: 8.11.07, 3D text object in small view box becomes blocky if Flying objects saver is activated.

CR26138 WHQL:- WIN2K Build 1988 on DUAL CPU SYS: 8.11.07, Stop error, MODE_EXCEPTION_NOT_HANDLED 1E(1D, 03, 00, 54) at boot

CR26168 2D- WHQLWinBench 98 Video Test Section: 8.11.07, Cinepack video corruption at full screen.

4.00_8.11.07

CR25917 open MPEG clip or window on desktop, will cause wrap around problem on right edge of desktop.

CR XXXXX HCT low resolution fail

CR XXXXX Winbench 99 hang

ICD:

CR25756 DOS full screen 3D maze (16 bit) appears to work completely. Because 3D maze is software rendering in 32 bit mode, there is a much larger window of opportunity for the display mode change to wreak havoc with the frame buffer virtual address and cause a Dr. Watson.

CR25757 Foxbear/Flipcube is improved. Dr. Watson errors are now significantly less frequent and 3d pipes screen saver doesn't always recover properly when foxbear/flipcube is terminated. (i.e. strange colors, double images, and bleed through into an occluding window).

CR25544 System doesn't hang. Rare Dr. Watson, and 3D pipes may not properly recover. (i.e. strange colors, double images, and bleed through into an occluding window).

Dlist conformance test failure

Large texture in QuakeIII (map test_fog2)

Texture flashing in QuakeII 8x6x32

Fix clipping of flat shaded triangles.

NT4.00 8.11.05

CR25876 2D- DFP only (FLIPCUBE): 8.11.04->06, blue line noise occurs at 16 & 32bpp modes

CR25477 Xing DVD Player: system hangs when playing DVD.

ICD:

CR25281 OpenGL: WHQL: DCT OpenGL test hangs system

SQA Engineering Release Comments: Status as of Date: 01/17/2000

- This version of this 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: Savage4/4+ (394/395/396/397 Rev. B,C & D)
- Regression of all open issues HAS been completed

Issues Fix Verified:

CR32378 Some systems: The background is miscolored just after reboot of the system in 256-color mode when IE5 Active Desktop is enabled.

New Open Issues:

None

Issues Not Fixed:

None

Disparities with Developer's Release Note:

None