Fueling the Inferno

The graphics inferno just got hotter with the introduction of the newest member of the NVIDIA® GeForce™ FX family—the GeForce FX 5950 Ultra graphics processing unit (GPU). Built on the proven, state-of-the-art NVIDIA® CineFX™ 2.0 architecture, the GeForce FX 5950 Ultra turns up the heat by delivering blazing speeds and ultra-high resolutions for next-generation PC games. Backed by the NVIDIA® ForceWare™ unified software environment (USE), the GeForce FX 5950 Ultra delivers unmatched features and rock-solid stability so you can play your game the way it's meant to be played.

BLAZING SPEEDS FOR NEXT-GENERATION GAMES

Continuing the NVIDIA tradition of incorporating only the best engineering process and design techniques, the GeForce FX 5950 Ultra GPU takes advantage of the sophisticated 0.13 micron process technology. This enables higher performance through faster clock rates. The GeForce FX 5950 Ultra GPU delivers NVIDIA® Intellisample™ high-resolution compression technology (HCT), which extends the experience of ultra-realistic visuals at lightning-fast speeds to higher resolutions and antialiasing levels. Previous compression technology is taken to the next level with new algorithms that compress more texels, pixels, and z values than ever before. Combined with a 256-bit memory bus and with support for up to 256 MB, the GeForce FX 5950 Ultra GPU delivers more memory bandwidth and efficiency to power today's most advanced games—like *Doom III*™ from id Software™—at blistering frame rates.

Far Cry by Crytek Studios

A NEW LEVEL OF CINEMATIC GAMING EFFECTS

Delivering a new level of advanced programmable techniques, the GeForce FX 5950 Ultra GPU continues the shift of PC special effects toward cinematic quality. In addition to performance enhancements, Intellisample HCT also delivers the highest-quality antialiasing for ultra-realistic visuals with no jagged edges. Intellisample HCT includes an advanced anisotropic engine designed to deliver true anisotropic filtering for incredible image quality without performance degradation. The GeForce FX 5950 Ultra GPU brings to life the revolutionary NVIDIA® UltraShadow™ technology for shadow-intensive, next-generation games like *Doom III* and Contraband Entertainment's *Abducted*. With its advanced pixel shaders, the CineFX 2.0 engine delivers up to double the floating-point pixel shader power of previous-generation GPUs, allowing for faster, more efficient execution of even the most complex pixel shading tasks. In addition, CineFX 2.0 continues to deliver the highest level of image quality and film-industry levels of precision through true 128-bit precision computing, enabling special effects on par with Hollywood films. With support for high-level shader languages like Cg and Microsoft® HLSL, the NVIDIA GeForce FX 5950 Ultra GPU simplifies access to all of these innovations, and facilitates a new generation of cinematic gaming.

UNLEASH THE EXPERIENCE

Get more out of your PC graphics with a powerful suite of complementary NVIDIA software. The GeForce FX 5950 Ultra GPUs leverage the NVIDIA ForceWare software solution to unleash the full potential of your PC graphics experience. An industry-leading software feature set, ForceWare delivers advanced technologies—including NVIDIA® nView™ multi-display technology for increased screen real estate, and NVIDIA® Digital Vibrance Control™ (DVC) technology for richer colors and brighter images and text. Built on the foundation of the NVIDIA Unified Driver Architecture (UDA), ForceWare's simple software installations and upgrades consistently deliver compatibility with future software applications and APIs for long-term reliability and stability.

Delivering the most complete software feature set, a rock-solid driver architecture, and continual performance and feature updates over the life of the product, ForceWare unleashes the full graphics potential of your GPU.

THE WAY IT'S MEANT TO BE PLAYED

The performance, compatibility, and reliability of NVIDIA GPUs make them the platform of choice for PC gamers worldwide. That's why today's hottest games are developed on NVIDIA, to be played on NVIDIA. With support for the latest APIs including Microsoft DirectX® 9.0 and OpenGL® 1.5, GeForce FX 5950 Ultra GPUs unleash stunning cinematic graphics and lifelike characters at blazing speeds. Look for the "NVIDIA®: The way it's meant to be played™" seal on games and PC hardware for the ultimate "install-and-play" experience. Equip yourself with an NVIDIA GeForce FX 5950 Ultra GPU so you can play your game the way it's meant to be played.

GEFORCE FX 5950 ULTRA GPU SPECIFICATIONS

256-BIT ADVANCED MEMORY INTERFACE

- Wider memory data path with next-generation controller technology for superior throughput

NVIDIA CINEFX 2.0 ENGINE

- Advanced pixel shaders deliver 2x the floating-point pixel shader performance of previous generations
- Support for Microsoft® DirectX® 9.0 (DX9) pixel shader 2.0+
- Support for DX9 vertex shader 2.0+
- Long pixel programs up to 1,024 instructions
- Long vertex programs up to 256 static instructions with up to 65,536 instructions executed
- Dynamic, conditional execution and flow control
- Architected for Cg and Microsoft HLSL for maximum compatibility with next-generation content
- 128-bit, studio-quality, floating-point precision computation through the entire rendering pipeline
- Native hardware support for 32-bpp, 64-bpp and 128-bpp rendering modes
- Up to 16 textures per rendering pass
- Support for sRGB texture format for gamma textures
- DirectX and S3TC texture compression
- Optimized for 32-bpp, 24-bpp, 16-bpp, 15-bpp, and 8-bpp modes
- True-color, 64x64 hardware cursor alpha
- Multibuffering (double, triple, or quad) for smooth animation and video playback

INTELLISAMPLE HCT

- Increased visual quality at higher resolutions through advances in compression, anisotropic filtering, and antialiasing technology
- Blistering-fast antialiasing and compression performance
- Support for advanced lossless compression algorithms for both color, texture, and z-data at even higher resolutions and frame rates
- Fast z-clear

ULTRASHADOW TECHNOLOGY

- Accelerates shadow volumes for next-generation games
- Accurately maintains shadows while discarding non-useful information

ADVANCED DISPLAY PIPELINE WITH FULL NVIDIA NVIEW CAPABILITIES

- Integrated NTSC/PAL TV encoder supporting resolutions up to 1024x768 without the need for panning with built-in Macrovision copy protection
- DVD and HDTV-ready MPEG-2 decoding up to 1920x1080i resolutions
- Dual, integrated 400MHz RAMDACs for display resolutions up to and including 2048x1536@85Hz
- Dual DVO ports for interfacing to external TMDS transmitters
- Internal TV support
- VIP 1.1 interface support for video-in function
- Microsoft Video Mixing Renderer (VMR) support for multiple video windows with full video quality and features in each window

NVIDIA DIGITAL VIBRANCE CONTROL (DVC) 3.0

- DVC image sharpening controls
- DVC color controls

ADVANCED TECHNOLOGY

- AGP 8X including Fast Writes and sideband addressing
- 0.13 micron process technology for higher levels of integration and higher operating clock speeds
- Advanced thermal management and thermal monitoring
- 40mmx40mm, BGA 1309 flip-chip package

BROAD OPERATING SYSTEM SUPPORT

- Microsoft Windows® XP
- Windows Me
- Windows 2000
- Windows 9x
- Macintosh

API SUPPORT

- Comprehensive Microsoft DirectX 9.0 (and lower) support
- OpenGL 1.5 (and lower) support

COMPATIBILITY

- NVIDIA Unified Driver Architecture (UDA)
- Fully compliant professional OpenGL 1.5 API with NVIDIA extensions, on all Linux and Windows operating systems
- WHQL-certified for Windows XP, Windows Me, Windows 2000
- Complete Linux Xfree86 drivers

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