WM9 to SDI output for SNAPfeed by IEEI

P/N FX4000SDI-IEEI-01

IEEI is a 29 year old technology company located in Newport Beach, California.

As a California corporation IEEI provides a wide range or products and services to rich media companies in Broadcast, Post Production, Animation, Editing, Film and Enterprise.

The part number FX4000SDI-IEEI-01 has been tested by AP Associated Press ENPS for use in SNAPfeed to allow for output of WM9 video to SDI in a Windows 2003 computer.

Please contact IEEI for more details including pricing and delivery.

Best Regards,
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The Integrated Graphics-to-Video Solution for Broadcast, Video, and Film Professionals

The **NVIDIA Quadro® FX 4000 SDI** is the ideal solution for on-air broadcast professionals across many applications such as virtual-sets, sports, and weather news systems to composite video footage onto virtual backgrounds and send the result to live video for TV broadcast. Additionally, the solution also allows film and video production, post-production, and finishing professionals to preview, in real time on HD broadcast monitors, the result of 3D compositing, editing, and color grading. This graphics-to-video-out solution delivers uncompressed 10-bit SDI from programmable graphics, enabling a direct connection to broadcast monitors, switchers, tape decks, or SDI projectors.

Image courtesy VizRT

Image courtesy Brainstorm/VertigoXMedia

The NVIDIA Quadro FX 4000 SDI provides two channels - fill or key – of 8- or 10-bit uncompressed SDI in HD or SD formats and analog and digital house synchronization. It supports both Windows and Linux and works on top of existing applications, or can be easily integrated within a broadcast or video editing application through NVIDIA's API.

The NVIDIA Quadro FX 4000 SDI leverages the new NVIDIA Quadro FX 4000 architecture with 2x the geometry and fill rate, 5x the hardware pixel read-back performance and 1.25x the memory bandwidth of previous generation workstation graphics. It also supports ultra-fast GDDR3 memory and

Rotated Grid FSAA for increased color accuracy and visual quality of edges and lines without compromising performance.

NVIDIA Quadro FX provides the ultimate in quality, precision, performance, and programmability. CAD and DCC applications acquire a new level of interactivity by enabling unprecedented capabilities in programmability and precision. For the first time, styling and production rendering become integral functions of the design workflow, shortening the production process and enabling faster time to market.

PRODUCT SPECIFICATIONS

|	
Product Name	**Quadro FX 4000 SDI**
Form Factor	ATX, 4.25" x 8.5", Dual
Framebuffer Memory	**256MB GDDR3**
Memory Interface	256-bit
Memory Bandwidth	**32GB/sec**
Max Power Consumption	104 W
Graphics Bus	**AGP 8x (2.1GB/sec)**
Display Connectors	DVI-I
SDI Support	**2 Channels**
Dual Link Support	Yes (1)
Genlock/Framelock Support	**One Analog Genlock, One Digital Genlock**
Auxiliary Power Connectors	Yes (2)
Number of Slots	**2**
Thermal Solution	Active Fansink

NVIDIA QUADRO FX 4000 SDI KEY FEATURES AND BENEFITS

UNCOMPRESSED 8- OR 10-BIT SDI OUTPUT

The programmable GPU architecture and the NVIDIA Quadro FX 4000 SDI specific graphic user interface enable configurability of the video channels, color space conversion, and gamma correction.

A video backend unit provides full support for outputs in the following HD and SD formats through 2 video channels with support for either 2 distinct channels of Fill or 1 channel of Fill and 1 channel of Key (Alpha or Z):

- 720p   59.94 Hz (SMPTE296)
- 720p   60.00 Hz (SMPTE296)
- 1035i   59.94 Hz (SMPTE260)
- 1035i   60.00 Hz (SMPTE260)
- 1080i   50.00 Hz (SMPTE295)
- 1080i   50.00 Hz (SMPTE274)

- 1080i   59.94 Hz (SMPTE274)
- 1080i   60.00 Hz (SMPTE274)
- 1080PsF 25.00 Hz (SMPTE274)
- 1080PsF 29.97 Hz (SMPTE274)
- 1080p   23.976 Hz (SMPTE274)
- 1080p   24.00 Hz (SMPTE274)
- 1080p   25.00 Hz (SMPTE274
- 1080p   30.00 Hz (SMPTE274)
- 480i   59.94 Hz (SMPTE259) NTSC
- 576i   50.00 Hz (SMPTE259) PAL
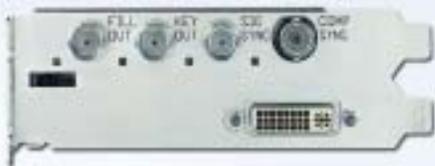
GENLOCK (HOUSE SYNCHRONIZATION)

One Digital and One Analog genlock (BNC) connectors provide connectivity to a video sync source for SMPTE standard (digital, black burst, tri-level) synchronization.

UNPARALLELED SUB-PIXEL PRECISION

12-bit sub-pixel precision delivers high geometric accuracy, eliminating spreckles, cracks, and other rasterization anomalies.

UNMATCHED COLOR PRECISION

Full 128-bit precision graphics pipeline enables sophisticated mathematical computations to maintain high accuracy, resulting in unmatched visual quality. Full IEEE 32-bit floating-point precision per color component (RGBA) delivers millions of color variations with the broadest dynamic range.

NEXT-GENERATION VERTEX AND PIXEL PROGRAMMABILITY

NVIDIA Quadro FX 4000 GPUs introduce infinite length vertex programs and dynamic flow control, removing the previous limits on complexity and structure of shader programs. With full support for Vertex and Shader Model 3.0, NVIDIA Quadro FX 4000 GPUs deliver sophisticated effects never before imagined for real-time graphics systems.

HARDWARE-ACCELERATED PIXEL READ-BACK

Greater than 1.0GB/sec, pixel read-back performance delivers massive host throughput, and more than 5x the performance of previous generation graphics systems.

ROTATED GRID FSAA (FSAA)

RG FSAA sampling algorithm introduces far greater sophistication in the sampling pattern, significantly increasing color accuracy and visual quality for edges and lines, reducing "jaggies" while maintaining performance.

HIGH PRECISION/DYNAMIC RANGE IMAGING (HPDR) TECHNOLOGY

Sets new standards for image clarity and quality through 32-bit per component floating point capabilities in shading, filtering, texturing and blending. Enables unprecedented rendered image quality for visual effects processing.

FEATURE DETAILS
- Microsoft Windows® XP
- Microsoft Windows 2000
- Linux® - Full OpenGL implementation, complete with NVIDIA and ARB extensions

NVIDIA QUADRO FX 4000 ARCHITECTURE
- 128-bit IEEE floating-point precision graphics pipeline
- 128-bit color precision
- 12-bit sub-pixel precision
- 16x FSAA
- 65,536 fragment instruction
- 65,536 vertex instruction
- 3D volumetric textures
- 12 pixels per clock rendering engine
- Hardware accelerated antialiased points & lines
- Hardware OpenGL® overlay planes
- Hardware accelerated two-sided lighting
- Hardware accelerated clipping planes
- 3rd-generation occlusion culling
- 16 textures per pixel in fragment programs
- AGP 8X with Fast Write
- Window ID Clipping Functionality
- Hardware Accelerated Line Stippling

SHADING ARCHITECTURE
- Fully programmable GPU (OpenGL1.5/DirectX 9.0 class)
- Long fragment and vertex programs (up to 65,536 instructions)
- Looping and subroutines (up to 256 loops per vertex program)
- Dynamic flow control
- Conditional execution

MEMORY
- High-speed 256MB GDDR3
- 256-bit memory interface
- 32GB/sec. memory bandwidth

HIGH LEVEL SHADER LANGUAGES
- Optimized compiler for Cg and Microsoft® HLSL
- OpenGL 1.5 and DirectX 9.0 support
- Open source compiler

HIGH-RESOLUTION ANTIALIASING
- 12-bit sub-pixel sampling precision enhances AA quality
- Rotated Grid Full-scene Antialiasing (FSAA)

MAXIMUM RESOLUTION
- Dual Link DVI-I output-drives a digital display at resolutions up to 1920x1200 @ 60Hz
- Maximum Digital resolution of 3840x2400 (@24Hz) through the dual-link connector
- Internal 400 MHz DAC drives one analog display up to 2048x1536 @ 75 Hz each

NVIEW ARCHITECTURE
- Advanced multi-display desktop and application management seamlessly integrated into Microsoft Windows

SDI SOFTWARE INTEGRATION
- Transparent Mode works on top of existing applications
  - 1 channel Fill
  - 8-bit:
    - RGB   4:4:4
    - YCrCb   4:2:2 or 4:4:4
- Extended Mode
  - Integrated into applications using NVIDIA's SDI API
  - 2 channel Fill or
  - 1 channel Fill + 1 channel Key
  - 8- or 10-bit:
    - RGB   4:4:4
    - YCrCb   4:2:2 or 4:4:4
    - 2x YCrCb 4:2:2+4:2:2
    - YCrCbA   4:2:2:4
    - RGBA   4:4:4:4 (8-bit only)

Where to buy NVIDIA Quadro | NVIDIA Quadro FX 4000 SDI is availa[...] and PNY Technologies (Europe) , Lead[...]