

Tech News:
ATI Avivo™ HD



ATI Avivo™ HD is AMD's new reference for advanced HD image processing. The ATI Avivo™ HD consists of the following parts:

- Unified Video Decoder (UVD)
- Advanced Video Processor (AVP)
- integrated 5.1 surround sound HDMI audio controller
- integrated HDCP encryption key
- Avivo™ Video Converter

Unified Video Decoder (UVD) is the most important hardware decoding component of the ATI Avivo™ HD, supporting hardware decoding of H.264, VC-1, and MPEG-2 format videos. UVD processes HD video, freeing up your CPU to power other applications and hardware. UVD is a dedicated video decoding processing unit on certain ATI Radeon HD 2000 series graphics processors that offloads both CPU and GPU rendering pipelines. UVD technology reduces power use, decreases system noise and increases notebook battery life during HD video playback.

The Advanced Video Processor (AVP) retrieves the video from memory, handles the upscaling/downscaling, de-interlacing and color correction and pushes it back to memory to increase quality of video, automatic adjustment of contrast and brightness, and hardware-assisted noise reduction, as well as keeping power consumption low. The AVP also uses 12-bit transform to reduce data loss during conversion, same as the previous generation Avivo.

Since the HDMI standard supports a transfer bandwidth up to 4.95 Gbps, with support of 165 Mpixel/s video in 1080p (1920x1080, or in UXGA resolution, 1600x1200) at 60 fps together with 8-channel 96 kHz or single channel 192 kHz 24-bit digital audio transfer, the ATI Avivo HD introduces a new era in PC to CE connectivity with built-in HDMI and 5.1 surround audio. This enables a truly easy, one-cable connection to a big-screen TV or home theater receiver with an ATI Radeon HD 2000 series graphics card.

HDCP is the encryption mechanism to allow playing protected contents such as HD-DVD and Blu-Ray discs. Normally an external ROM chip is needed to store the encryption keys. On the Radeon HD 2000 series these keys are stored inside the chip, lowering the cost of manufacturing video cards compatible with HDCP and improving compatibility with HDCP standard.



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ATI has also released a "transcoder," called the "Avivo™ Video Converter". This is a software tool that converts digital video from one file format to another, enabling the same video clip to play on industry standard home DVD/DivX® players, PC's or portable media devices such as the Apple® iPod®, Sony® portable gaming device, Creative® Zen™ and many others. The Avivo™ Video Converter accepts almost any video file format as a source, and outputs to many different file formats including MPEG-1, MPEG-2, MPEG-4/DivX, WMV, H.264/AVC™*, and more. Compared to conventional conversion file methods, the Avivo Video Converter cuts total transcoding time by up to 80%, meaning that your time is spent watching, not waiting.

PEAKHARDWARE has already introduced many HD 2000 series products with ATI Avivo™ HD technology. We will continue to introduce more in the future.



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