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NVIDIA GeForce 8500-8600 Series: Hardware H.264 Decoding Supporter

Better even than the GeForce 8800GTX, but not performance wise

When it comes to offering products that can do more than one single task, the video cards are pretty much today's champions. Compared to the multi-core architecture of current CPU's, these require additional processing units to stream multiple threads of information properly. But since NVIDIA came out with the G80 series of graphics cards, all of that changed. Having a GPU that has the ability of processing any type of floating point information means that the expansion capabilities of this architecture are many and it only depends on how "talented" is the programmer that writes the code for the stream processors to handle, and what they are set to do. Like I've said before, having a product that can perform multiple tasks is necessary for certain fields in the computer industry. One of these multi purpose products is the new series of GeForce 8600 and GeForce 8500 graphics cards, which are fitted with a function that complements NVIDIA's PureVideo technology superbly. What these cards are able to do is to use the GPU for all of the H.264 decoding, thus leaving the CPU alone, reducing its utilization and power consumption. This offloading technology is done by adding CAVLC/CABAC decode acceleration to the graphics cards' new video processor, called VP2, which combined with a Bit Stream Processor (BSP) and a AES128 engine, allows for reducing CPU overhead. However appealing this technology would be to users that want a mainstream graphics card with H.264 hardware decoding for their HDTVs, there is still a small problem: the cards are only capable of offering hardware decoding for H.264 and H.264 alone. If the movie is coded in MPEG2 or VC-1, tough luck, your CPU will start going haywire. In real life applications, graphics cards such as the NVIDIA GeForce 8800GTX or ATI's Radeon X1950XTX, which don't feature this kind of hardware-based decoding, use up the processor anywhere from 65% to 75%, while no hardware acceleration means that an 88% CPU usage is at hand, or at least that's what the tests done by the guys over at Anandtech.com revealed. They were using an Intel Core 2 Duo E6320 processor, on an ASUS P5B Deluxe motherboard, 4x1GB DDR2-800 4-4-4-12 Corsair XMS2 memory and Windows Vista Ultimate.