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[ATI's R600 Design to Spawn Mother of All GPUs](#)

NVIDIA, beware!

All those R600 papers, leaked information and prototype boards, which have been officially or unofficially provided by ATI, reveal outstanding flexibility options and it will be interesting to see what powerful technologies could derive from all that processing power. It is not a matter of unparalleled 3DMark scores, but rather the expansion of ATI's professional product line-up. Though Nvidia is thoroughly working on its G80GL, a professional Quadro version of the G80, which should have additional video RAM, but lower clock frequencies, ATI's R600 micro-architecture and the PCB designs seem to be so flexible that the next six months will see an unstoppable flood of various products based on R600, R610 and R630 designs. But ATI isn't focusing only on the consumer market. The Canadians work on a huge project, and if it manages to pull it off, this could turn out to be one hell of an achievement. We are talking about a GPGPU (General Purpose Graphics Processing Unit) product codenamed FireStream/Stream Processor. This monster graphics board is said to incorporate no less than four gigabytes of dedicated video memory. The powerful graphics board could pose some problems regarding requirements for 4X1024 Mbit GDDR-2/3/4 memory chips, as neither Samsung nor Qimonda can presently manufacture such modules. However, design documents specifically mention a 4GB version followed by one with "only" 2GB. ATI plans a special design for the 4 GB board, which does not involve tricks like putting a GPU on an ATX form factor motherboard and calling it a "graphics board." ATI is currently pondering on a 12" design for their mother of all GPUs. This board will feature only one DVI connector telling us that it is not necessarily a pros only device. It will be interesting to see if ATI would be able to provide support for External CrossFire boxes that can be stacked up to ultimately deliver the supreme 3D performance.