

12 February 2008

By: Bogdan Botezatu, Hardware Editor



The Cortex Chip, one of ST Micro's previous creations
ST Microelectronics

[AMD Teams Up With ST Microelectronics for Cellphone CPU](#)

The chip manufacturer fights Nvidia's mobile CPU with its own one

Nvidia has rolled out the [APX 2500 mobile CPU with integrated graphics](#), the company's first application processor for handheld devices. Few hours later, another CPU for cellphones emerged from the ST Microelectronics laboratories. The CPU not only has similar features with Nvidia's chip, but it also integrates an AMD graphics engine. The Nomadik STn8820 cellphone processor, as the new chip is called, was announced during the Mobile World Congress in Barcelona, Spain. Interesting enough, the new processor is using the very same core as the Nvidia APX 2500 System-on-a-Chip, except for the fact that it comes with AMD's licensed technology for integrated graphics. The Stn8820 is running on an ARM11 core with a 32 KB instruction cache, 32 KB L1 and 256 KB L2 cache. According to ST Microelectronics engineers, the chip can be clocked at a maximum core speed of 528 MHz. The graphics engine is still undocumented, but it is for sure that it is based on AMD technologies. Moreover, the chip is the result of a licensing agreement that was inked by ST Microelectronics and AMD one year ago. The licensing agreement covers both 2D and 3D as well as vector graphics core engines and some other software that works in conjunction with the OpenGL ES 2.0 and OpenVG 1.0 specifications sets. The new chip from ST Microelectronics is also capable of encoding and decoding video files at resolutions of 720 pixels (30 frames per second). However, the APX 2500 and the Stn8820 are different in the supported formats. For instance, Nvidia's chip can handle H.264, MPEG-4, VC-1 and WMV9, while ST Microelectronics' Stn8820 processor is capable of handling H264, VC1, MPEG-2 and Divx formats. Nvidia is stronger when it comes to imaging sensors support. While its chip can take up to 12 megapixels resolutions, the Stn8820 with an AMD engine can only support 8 megapixels. AMD has developed a Pinball game in order to demonstrate the chip's power and advanced per pixel shader effects.