Exynos 5 Dual chip is unrobed by Samsung

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(Phys.org) -- Samsung has released details about its next-generation Exynos 5 Dual. This is a dual-core mobile CPU based on ARM Cortex-A15 architecture. That ARM Cortex A15 word string is no small differentiator for Samsung and therein lies the edge. With ARM technology, Samsung plans to answer the demands of mobile computing users—systems that can deliver significant power and speed but also energy efficiency. Samsung says the Exynos 5 was designed to meet all three of graphic-intensive, multi-task and power efficient requirements.

The company is hoping that Exynos 5 Dual will lead the pack in the high-end mobile application processor market. A Samsung white paper that presents the details says that the “Exynos 5 Dual is designed for high-end tablets that require multi-window operations, full multitasking, and fast

response while running applications. Exynos 5 Dual is the first chip in the market to integrate Cortex-A15 dual core. The computing capability of Cortex-A15 dual core is similar to the CPU of a personal computer."

Designed with the 32nm low-power process, Exynos 5 Dual provides performance features such as dual core CPU, highest memory bandwidth, WQXGA display, 1080p 60fps video hardware, 3D graphics hardware, Image Signal Processor, and high-speed interfaces such as USB 3.0 and SATA3.

Some Samsung watchers will not be surprised to see a quad-core version of the dual-core Exynos 5 next year.

The upcoming Exynos 5 is a dual core chip; it does promise faster speeds running at 1.7 gigahertz with ARM's quad-core Mali T-604 graphics processor. "With Mali-T604, Exynos 5 Dual delivers two times better GPU performance than Exynos 4," according to Samsung.

AndroidAuthority comments on the implications. "What's nice about Exynos 5 Dual is that it doesn't come just with a next-gen CPU, but also a next-gen GPU. This is a fortunate match, as they are both designed by ARM itself, so they benefit from higher integration, and also because ARM changes its GPU architecture only once every five years."

Mali T604 is the first GPU design based on the Midgard architecture, with OpenGL ES 3.0 and OpenCL 1.1 full profile. With the quad-core Mali-T604 GPU, the Exynos 5 Dual supports resolutions up to 2560 by 1600 and stereoscopic 3-D.

The chip will also support USB 3.0, which could lead to smartphones and tablets with USB 3.0 ports for fast data transfers. Samsung has also incorporated SATA III controllers into the Exynos 5 Dual.

The chip supports Wi-Fi Display technology, where users can stream media from smartphone to supported TV.

All signs are that enthusiasts are praising the Exynos 5 Dual as the chip to look for in future tablets and smartphones, because of its powerful CPU and GPU features. Samsung, though, has not yet announced any specific products that will use the Exynos 5 Dual.

More information: www.samsung.com/global/busines … s/products5dual.html