Intel Launches New Low-Power Moorestown Chip For Smartphones (w/ Video)

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Intel's new low-power Moorestown Chip is very power efficient and packs enough computational muscle to enable features such as video conferencing and HD video.

(PhysOrg.com) -- Intel will be releasing their new ultra-low-power Atom base processor designed specifically for mobile devices. The chip package is based on Intel's 45-nanometer process and packs over 140 million transistors.

Intel's chip, codename "Moorestown", is highly power efficient and is capable of running three programs simultaneously, including a very high quality movie clip. This was demonstrated at the 2010 CES show by Pankaj Kedia of Intel's Ultra Mobility Group using the new LG

smartphone.

The Moorestown system-on-chip includes the Intel Atom Processor Z6xx Series (system-on-chip), the Intel Platform Controller Hub MP20, and a dedicated Mixed Signal IC (MSIC).

The Intel Atom Z6xx processor combines the CPU core with 3-D graphics, video encode and decode, as well as memory and display controllers. It also includes the MP20 Platform Controller Hub which supports a range of system-level functions and I/O blocks. Additionally, a dedicated MSIC integrates power delivery and battery charging, and consolidates a range of analog and digital components.

The new Moorestown chip will support clock speeds up to 1.5 GHz for high-end smartphones as compared to 1 GHz used by Qualcomm's Snapdragon processors. Intel will also have a 1.9 GHz chip that will be used in tablet PC's and other handheld devices.

Combined these chips use only 1.75% the power of current Atom chips, in the idle state. Instead of the 1.2 Watts drawn by current Atom CPUs, the new Moorestown chips will draw just 21 milliwatts.

According to Intel these power saving features translate to more than 10 days of standby time, up to 2 days of audio playback and 4 to 5 hours of browsing and video battery life.

PC like experience is also combined with 1.5-3x higher compute performance, 2-4x richer graphics, >4x higher JavaScript performance, and support for full HD 1080p high-profile video decoding and 720p HD video recording.

Intel is already producing these chips and consumers can expect them in mobile devices later this year. The company hasn't announced any

smartphone models that will use the new low-power Moorestown chip; however the company demonstrated the use of the new Atom processors in a phone produced by LG at the 2010 CES.

More information: Intel Atom Processor Z6xx Fact Sheet: download.intel.com/pressroom/k … ocessor_Platform.pdf