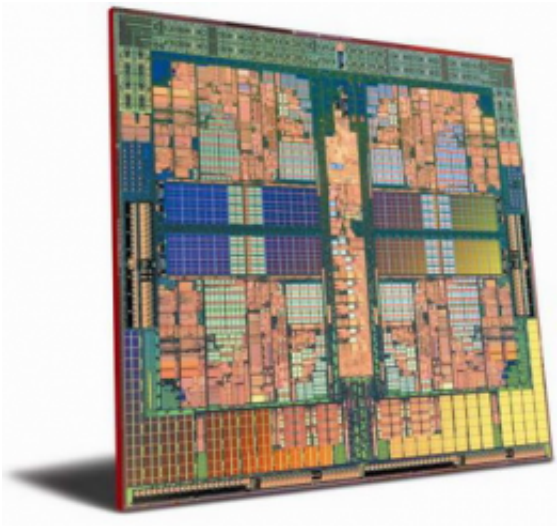
Intel will highlight next-gen Haswell processors at next week's IDF

September 7 2012, by Nancy Owano



(Phys.org)—Can Intel possibly reduce the energy consumption of its processors by 41 percent? Intel is working on it and the result will be Haswell, its next generation of processors, and the key topic of discussions at next week's Intel Developer Forum in San Francisco. Intel's strategic roadmap is a power-reduction roadmap, where Intel hopes to make a difference in the brand behind computers that are thinner, lighter and stay on longer without needing a recharge. The next-generation processor chips will be officially unveiled at the IDF and professionals will judge for themselves whether this means a new day in Intel's ability to compete against competitors in mobile devices and

tablets.

Haswell represents a new microarchitecture onto the existing 22nm manufacturing process used in Ivy Bridge. Intel says this fourth iteration will have improved security. The biggest talking point, though, is lower energy consumption.

With Haswell, Intel has dropped the energy usage of the chip to 10 watts, down from 17 watts used by Ivy Bridge. *The Verge* details what the talk is about in Haswell's "ten-watt TDP." Thermal design point (TDP) has to do with the amount of cooling needed to dissipate a chip's heat. Intel's Ivy Bridge processors have a 17W TDP.

With the lower energy consumption comes the benefit that ultrabooks and laptops will have a longer battery life on a yet thinner form. In the consumer marketplace, this is a requisite if Intel wants to compete in a demanding user experience that already knows the pleasures of carrying lightweight tablets and app-loaded smartphones rather than back-straining laptops for basic tasks on the run. Haswell's promise could translate into lighter-weight ultrabooks with practically all-day better life. Reports say Haswell-powered devices will likely carry less obtrusive fans along with the thinner form factor compared to current ultrabooks.

Intel partners may see the first Haswell CPUs in Q4 of this year. Consumer products using Haswell-based CPUs will be available next year.

Inside Intel, the more noise about Haswell the more opportunity for Intel to drown out the disappointed sighs from investors over reduced revenue estimates. The cuts are attributed to poor economies in Europe, the United States and China, as well as to enfeebled demand for PCs against the growing popularity of mobile devices.

Intel supplies processors for more than 80 percent of the world's computers but has to be restive over the fact that competition has done better in porting their technologies over to smartphones and tablets. Those products are typically powered by chip designs licensed by ARM. A principal reason that competition has done better than Intel in the mobile market rests in energy-efficient processors.