Intel offers look at Core M processor using Broadwell config

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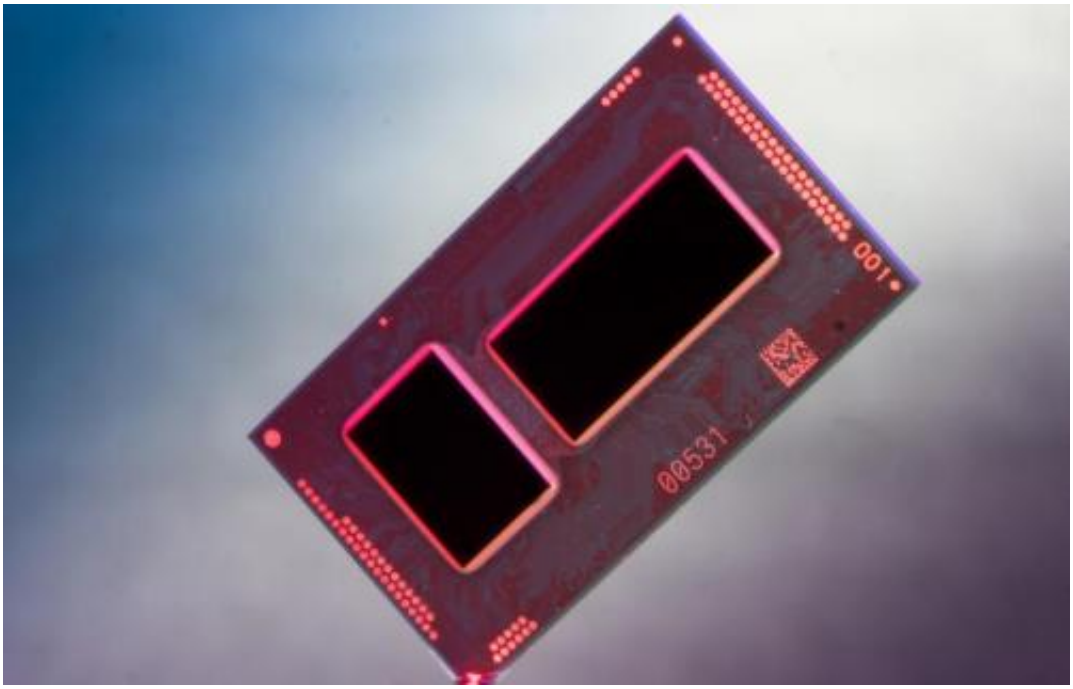

14nm Package (codenamed 'Broadwell')

Intel on Monday provided details about the microarchitecture of the Intel Core M processor, which is the first product to be manufactured using 14nm technology. As such, the world is in for a taste of a 14-nanometer chip. AnandTech also said that "Core M will be launch vehicle for Broadwell and will be released for the holiday period this year." Intel executives provided some of the first details on the chips built using Intel technology. Providing some context to the event, CNET on Monday

observed how Intel and other chip companies have been racing to advance processor technologies "by shrinking the geometries of the chips." CNET said the race looks as if Intel is ahead of the pack, with processors built at 14 nanometers, or billionths of a meter. AnandTech commented: "Intel appears to be back on track. 14nm is in volume production in time for Broadwell-Y to reach retail before the end of the year."

What does the Core M mean for manufacturers and consumers? CNET said, for one result, the Intel chip is to allow PC makers to build much thinner and lighter devices. In all, the Intel move to a14 nanometer chip from a 22-nanometer chip can translate into devices that are "thinner, lighter, more power-efficient, and don't need a fan," said CNET. The Wall Street Journal said, "The first chip based on the new production process—which is called the Intel Core M and based on a design called Broadwell —will be targeted at tablets and other devices that operate without a cooling fan but are as thin as nine millimeters or less.".

Intel's own statement said, "The combination of the new microarchitecture and manufacturing process will usher in a wave of innovation in new form factors, experiences and systems that are thinner and run silent and cool."

As for process, "Intel's 14 nanometer technology uses second-generation Tri-gate transistors to deliver industry-leading performance, power, density and cost per transistor," said Mark Bohr, Intel senior fellow, technology and manufacturing Group, and director, process architecture and integration. "Intel's investments and commitment to Moore's law is at the heart of what our teams have been able to accomplish with this new process."

CNET noted the first systems using Core M will reach shelves for the holiday period, and the bulk of new devices will be available in the first

half of 2015. Gizmodo remarked, "We'll most likely see Core M branding on the boxes of select tablet devices this holiday season with even more laptop and PCs hopping on board in early 2015."

In the bigger picture, AnandTech commented that "Intel's preview is very much a preview; we will see bits and pieces of Broadwell's CPU architecture, GPU architecture, and packaging, along with information about Intel's 14nm process. However this isn't a full architecture preview or a full process breakdown. Both of those will have to wait for Intel's usual forum of IDF." The Wall Street Journal also said that Intel plans to disclose more about the new technology and products based on it at the September event.

More information: — newsroom.intel.com/community/i … ss-technical-details

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