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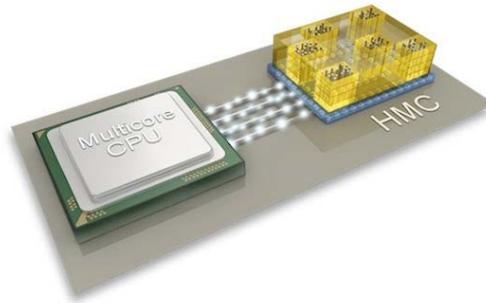- Home
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Hybrid Cube Memory Specification Finalized, Will Offer 15X Increase In Bandwidth

Wednesday, April 03, 2013 - by Ray Willington

"Hybrid Memory Cube" sounds like something out of a 80s-era science fiction movie, but as these things tend to go, sci-fi often leads to reality. More than 100 developer and adopter members of the Hybrid Memory Cube Consortium (HMCC) today announced they've reached consensus for the global standard that will deliver a much-anticipated, disruptive memory computing solution. Developed in only 17 months, the final specification marks the turning point for designers in a wide range of segments-from networking and high-performance computing, to industrial and beyond-to begin designing Hybrid Memory Cube (HMC) technology into future products.

A major breakthrough with HMC is the long-awaited utilization of advanced technologies to combine highperformance logic with state-of-the-art DRAM. With this first HMC milestone reached so quickly, consortium members have elected to extend their collaborative effort to achieve agreement on the next generation of HMC interface standards. Here's a bit more as told by the entity: "As envisioned, HMC capabilities will leap beyond current and near-term memory architectures in the areas of performance, packaging and power efficiency. One of the primary challenges facing the industry-and a key motivation for forming the HMCC-is that the memory bandwidth required by high-performance computers and next-generation networking equipment has increased beyond what conventional memory architectures can efficiently provide. The term "memory wall" has been used to describe this challenge. Breaking through the memory wall requires an architecture such as HMC that can provide increased density and bandwidth with significantly lower power consumption."

Altera, ARM, Cray, Fujitsu, GLOBALFOUNDRIES, HP, IBM, Marvell, Micron Technology, National Instruments, Open-Silicon, Samsung, and more are onboard, and it could mark the start of quite the breakthrough for memory. It's about time we had a reason to expect memory benchmarks to explode, wouldn't you say?

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Via: Hybrid Memory Cube | News Archive | **Tags:** memory, RAM, Hybrid Memory Cube, Cube, hmc
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By KOwen on Apr 3, 2013

What does this mean for DDR4 scheduled for release later this year? Are we going to have another HDD v. SSD type dilemma where it takes years for the faster and more efficient tech to become affordable enough to get people to stop using the outdated format?

0 REPLY

By KOwen on Apr 3, 2013

Remember the debates about how long the PS4 will be superior to desktop computers because of its unified 8GB of GDDR5 memory? I guess it will be about a year. Can't wait to get my hands on this goodness.

0 REPLY

By RiCoFrost on Apr 3, 2013

LOL

0 REPLY

By KWalsh on Apr 3, 2013

@KOwen - not to worry sir they will still release the DDR4 later this year as they have only finished with the dev of the HMC and will surly take a year or two before the standerd is adopted cand incorporated. As for DDR5 the tech has been there for some time now as video cards have been rocking this memory, I am surprised that DDR4 has not yet been adopted as the more time goes by I'm sure you will notice memory companies keep trying to squeeze every drop of speed out of the current chips. But in doing so the timings will always have to go up, I feel that a new standerd is needed to keep up with the desired demands of today. With the new PS4 they have to push out hardware that is top notch and rare, because the same thing will happen with the PS4 as did with the PS3, after a few years the hardware is now useless and out dated. In order to keep a good profit margin they have to stretch out what they have by way of firm and software updates, but even then they can only take it so far before games start to over power the hardware they are ran on.

0 REPLY

By kalqlate on Apr 5, 2013

@KWalsh - GDDR and SDDR are not exactly the same tech and are on different development time lines:

http://en.wikipedia.org/wiki/GDDR

http://www.hardwaresecrets.com/article/168

0   **REPLY**

By Clixxer on Apr 6, 2013

Im curious to see what the prices will be on DDR4. DDR3 can be had for cheap these days for 8 GBs of ram. I know DDR2 has gotten expensive just because noone makes it anymore and it is outdated. From what I have read though for DDR4 it should be a nice improvement over DDR3 with lower voltages and if its point to point memory controllers.

0   **REPLY**

By OSunday on Apr 9, 2013

DDR4 is on the horizon, this is going to be a "fun" transition in a couple years.

Technological advancements are always great and welcome but man can they be a hassle, between new socket sizes and probably memory slots as well there's going to be a huge variety in hardware as DDR3 will probably be continued to be supported for a while too.

Hopefully the pricing of DDR4 when it comes out can follow the trend of how DDR3 has been recently with reasonably cheap prices and it doesn't get sold overpriced just because it'll be a "new" technology.

0   **REPLY**

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While I can hope and pray with you about them not being sold overpriced due to being new technology I just know it will happen, we can only hope their isnt much of a price difference until DDR3 does become obsolete and goes the way of DDR2 with prices raising for left over stock and new stuff dropping because of the saturated market.

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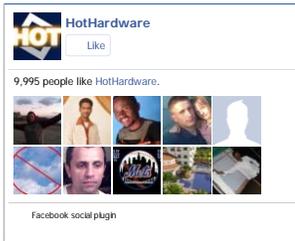Subscribe to HH News Alerts!

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