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Drupal.behaviors.print = function(context) {window.print();window.close();}>
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Innovative Chip Design for HPC

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Innovative Chip Design for HPC

By [Matthew Dublin](#)

Samsung and Micron have announced a partnership to develop a new type of memory chip, designed specifically for HPC. Called the [Hybrid Cube Consortium](#), the new partnership is ambitiously claiming to build a chip with 15 times the memory bandwidth of current HPC chips. If they develop an approach that really works seamlessly in a multi-terabyte environment, there could be a slew of application areas for bioinformatics.

While the Hybrid Cube Consortium plans to release their new chip architecture sometime in 2012, HP has announced that it intends to release its "[memristor](#)" memory—a two-terminal non-volatile memory technology—in the next 18 months. HP's memristor is being pitched as a replacement for flash memory, specifically DRAM (direct random access memory) in three to four years, and then SRAM (static-random access memory).

The Hybrid Memory Cube approach is to place the logic layer of the chip on the bottom and the memory densely stacked on top in a cube as opposed to a flatter type of architecture common in current chips.

