CMT moves to production on new NV Ram

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A stealthy embedded non-volatile memory developer Chip Memory Technology Inc. has announced a design win with Chrontel Inc., a vendor of video ICs, and claims to be in volume production with multiple customers at three foundries.

The LogicFlash memory – which has also been described as a non-volatile embedded DRAM – is designed for implementation in standard CMOS logic processes. CMT (San Jose, Calif.) claims it requires no additional foundry steps or mask layers beyond those required for logic. CMT said that because competing embedded non-volatile memory technologies require additional masks and process steps LogicFlash has the advantage of being highly portable and scalable, while supporting densities up to 4-Mbit.

CMT has announced that it has licensed its LogicFlash embedded non-volatile memory technology to Chrontel (San Jose, Calif.) for volume production in multiple products. Chrontel is currently incorporating LogicFlash into devices being produced in a standard 130-nm logic process, CMT said.

CMT was co-founded in 2007 by CEO Wingyu Leung and several other industry executives who collectively hold more than 150 patents. Leung previously served as chief technology officer and board member at Mosys Inc. (Santa Clara, Calif.).

In a presentation at the 2009 Semiconductor Memory Symposium Leung described CMT's memory technology as having the four attributes of the best universal memory, namely: small size like DRAM; low standby power like EEPROM or flash; non-volatile data retention; and fast random access like SRAM.

That presentation discusses a modification to embedded DRAM processes that incorporates a SONOS – silicon, oxygen, nitrogen, oxygen, silicon – structure on the gate dielectric of the pass transistor. This has the benefit of requiring no additional masks, implants or materials and allows all logic transistors to remain the same.

By: Docmemory