

Re: A chip too far? Where is your solution Mr Larkin?

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 - *Date:* Wed, 20 Aug 2008 12:50:10 GMT
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On a sunny day (Wed, 20 Aug 2008 15:27:36 +0300) it happened Anssi Saari <as@xxxxxx> wrote in <vg3ljyrna6f.fsf@xxxxxxxxxxxxxxxxxxxxxxxxxxxx>:

Jan Panteltje <pNaonStpealmtje@xxxxxxxx> writes:

FPGA is the perfect solution here.
So we have then mother boards with on the fly programmable logic as part of the programs that run on it.

Hmm, I wonder if there are any consumer priced motherboards like that? Some retro computers implemented with FPGAs exist, but they don't exactly have 3 GHz C2Ds as the main CPU... More interesting FPGA boards tend to be a little pricey, like the Xilinx ML-505, which is shaped so that it can fit in an x4 PCIe slot.

Well, 'mass production' will help...

A Stratix 4 with 680k logic elements in quantities that we see for PC sales would perhaps be possible.

What needs to be invented is a way to interface it to the CPU and rest of the system, in such a way that each program can reserve and use some of those gates at the same time.

Lots of IO I'd imagine.

Yes PCIe boards exist, I like this picture too:

<http://www.heise.de/bilder/113681/1/1>

It does not have to be just _one_ FPGA (picture is from this link in German:

<http://www.heise.de/security/Von-Woerterbuechern-und-Regenboegen-/artikel/113681>

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There is a whole lot of issues to be solved, clock domains, what not, but at least the FPGA approach should increase speed.

It is a proven concept... unlike using n cores on sequential code...

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