

# Re: FPGA recommendations

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  - *Date:* Mon, 05 Dec 2005 17:58:05 -0500
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On 5 Dec 2005 13:10:28 -0800, the renowned "stickyfox@xxxxxxxxx" <[stickyfox@xxxxxxxxx](mailto:stickyfox@xxxxxxxxx)> wrote:

>Hello all,

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>I'm looking for an FPGA platform to produce some low-volume designs on,  
>and I would like to hear the group's suggestions on manufacturers.

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>What I am most concerned about is the flexibility and functionality of  
>the programming tools. In other words, whether they're crippled unless  
>I pay thousands of dollars for the "full version." I won't be selling  
>thousands of units, so I can't consider the software an investment. I  
>don't mind paying a reasonable amount for a compiler, but I am not in  
>the same market as Linksys and I can't afford what they pay for  
>software.

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>I am currently using Altera flex0k's and quartus, which is free but has  
>some fairly minor limitations. I can more or less live with the  
>restrictions as they more or less force me to buy a larger chip than is  
>necessary but still do basically anything. However, they could pull the  
>rug under me at any moment by not licensing the free compiler (it  
>requires a new license file periodically.) Is there a better option? I  
>recently discovered that Atmel has a CPLD/FPGA line; does anyone have  
>experience with it?

Look at Xilinx. They seem to be aggressively pursuing your (our) market. You can download the software, IIRC the limitations don't kick in until you hit the really big expensive parts. The Mentor ModelSim requires a node-locked license, but it's free as well (and I think Xilinx is working on their own simulation package). Apparently the Mentor s/w deliberately runs slower than the \$\$ package, though, once you exceed 10,000 lines of code).

Also, at least according to my FAE, they deliberately don't go overboard on protecting their 'evaluation' software (you can de/re-install to get another 'evaluation', he says) because they want to sell silicon. They have soft processor cores available (8-bit is free in object code) and some of their huge 90nm arrays have a handful of PowerPCs littering the corners of the chip in case you need a

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processor.

I've found the S/W pretty much bug-free (perhaps not quirk-free) so far, though it will tax the speed of the best computer you can buy. I have not used Altera's software, so I can't compare.