

Get the Platform Flash PROMise

Reduce your costs and minimize board space for any Xilinx FPGA design.

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Designing with FPGAs often requires two different types of configuration PROMs. In the design and test phase, in-system programmable (ISP) PROMs offer maximum flexibility for design changes, while one-time programmable (OTP) PROMs are used for manufacturing once the design is complete.

You may, however, have to change your board design to accommodate higher density, lower cost OTP PROMs. This problem becomes more acute if you are using high-density FPGAs that need as many as 10 ISP PROMs and five OTP PROMs.

Xilinx has a solution with the new Platform Flash PROM family, which can configure any Xilinx FPGA – most with just one PROM. You get low-cost, in-system programmability, so you no longer have to change from one PROM to another to reduce production costs. See Table 1 for details.

Economical and Flexible

The December 2004 100K-unit price of Platform Flash PROMs is projected to be \$1.05 for the 1 megabit (Mb) version (XCF01S) and \$10.40 for the 32 Mb version (XCF32P). This not only represents a dramatic price decrease over previous generations of configuration ISP PROMs, but for OTP PROMs as well.

Engineers know that they need to reprogram FPGAs during logic design and testing, and Platform Flash PROMs offer flexible in-system programmability to ease development. However, don't forget that flexibility can be used at other times in the product life. For example, during manufacturing, you can program the PROM to test the board, and



then reprogram the PROM with the final FPGA design. You increase quality while decreasing manufacturing costs.

In-system programmability also lets you reprogram the FPGA remotely to add new features or fix problems. This added dimension of flexibility means you reduce maintenance and field repair costs, plus you keep your customers happier.

Big Functionality in Small Packages

The Platform Flash PROMs come in a variety of densities in two packages. The 1 Mb, 2 Mb, and 4 Mb density PROMs are offered in the very small (6.4 mm x 6.5 mm) VO20 TSSOP package, the smallest package area per megabit in the industry. These versions offer serial configuration for FPGAs and a

very low-cost solution for Spartan™-IIE, Spartan-3, and Virtex-II Pro™ FPGAs.

The family is also available in 8 Mb, 16 Mb, and 32 Mb densities, which come in a small (8 mm x 9 mm) FS48 thin flat ball grid array package. These versions offer both serial and parallel configuration, and are well suited for higher density Spartan-3 and

Virtex-II Pro FPGAs.

To reduce board space and costs, you can pack on average 50% more bits into your configuration PROMs using the compression capability in our higher density packages. You can use one low-cost PROM to configure multiple FPGAs. You can even put multiple programs on one PROM and change the FPGA program on the fly.

Conclusion

Now you can use one PROM family to configure all of your FPGAs, reducing your manufacturing and inventory costs. The Platform Flash PROM family offers you ultimate flexibility at a very low cost. For more information, visit www.xilinx.com/product/platformflash/. ❧

	XCF01S	XCF02S	XCF04S	XCF08P	XCF16P	XCF32P
Density	1 Mb	2 Mb	4 Mb	8 Mb	16 Mb	32 Mb
JTAG Prog	■	■	■	■	■	■
Serial Config	■	■	■	■	■	■
SelectMap Config				■	■	■
Compression				■	■	■
VCC (V)	3.3	3.3	3.3	1.8	1.8	1.8
VCCO (V)	1.8-3.3	1.8-3.3	1.8-3.3	1.5-3.3	1.5-3.3	1.5-3.3
Clock (MHz)	33	33	33	40	40	40
Package	VO20	VO20	VO20	FS48	FS48	FS48

Table 1 - Platform Flash PROM specifications