



Virtex-4 EasyPath™ Solutions: The Lowest System Cost Just Got Lower

Superior flexibility and performance with the lowest cost.

For customers developing high-performance, high-density systems, moving to ASICs for volume production includes the risk of design conversions and respins, high-NREs, cost of design tools and resources, and long design cycles and lead times.

The revolutionary Virtex-4™ architecture offers ASIC-like system integration with multiple platforms, each with an optimized balance of capabilities and cost. The Virtex-4 EasyPath solution further lowers the system cost while maintaining all the benefits of the Virtex-4 architecture.

EasyPath devices are identical to the FPGA and there is no risk of conversion or hidden costs. Xilinx also offers one of the fastest turnaround times, with first silicon production devices shipping in eight weeks. These factors make it the FPGA industry's easiest, risk-free, cost-reduction path for volume production.



Up to 80% cost reduction without the risk of ASIC conversions

The cost reduction advantages of the Virtex-4 and Virtex-II™ EasyPath solutions are compelling:

- **Up to 80% cost reduction** – The Virtex-series EasyPath solution offers a guaranteed 30% cost savings and up to 80% cost reduction.
- **What you design is what you get** – Since Virtex-series EasyPath devices are identical in timing, architecture, and pin outs to the FPGAs, there are no surprises when you go to volume production.
- **Identical performance and functionality** – Our custom test program guarantees that your production devices operate exactly the same as your prototypes.
- **Minimal engineering effort** – Unlike custom solutions like ASICs and Structured ASICs, there is no need for design conversion, prototype verification, design qualification, or board redesign.
- **No hidden costs** – No additional engineering resources, tools, or conversion processes are required.
- **Fastest time to market** – With ASICs or Structured ASICs, there is a long prototype qualification cycle that can lead to additional delays in going to production. Xilinx EasyPath enables production in only eight weeks, accelerating your time to profitability.
- **No Additional Design Software** – Identical flow to FPGA.

Lower Cost Through Test Innovation

Virtex-4 EasyPath devices are tested for the actual resources used by a customer's original design. This methodology increases the yield and lowers the overall costs, resulting in cost savings up to 80% compared to the original FPGA. Xilinx also offers industry leading 99.9% fault coverage for the Virtex-4 and Virtex-II EasyPath devices.

Fastest Time to Volume

Xilinx programmable solutions are unquestionably the fastest, the easiest, and the most reliable way to develop new products. Virtex-4, with a choice of multiple platforms and cutting edge design tools, simplifies any design challenge. The Virtex-4 EasyPath solutions further extends this advantage with its eight-week turn-around, offering one of the shortest times in the industry for volume production.

Design with Confidence

Unlike ASICs or Structured ASICs, Virtex-4 and Virtex-II EasyPath devices are identical in all aspects to the FPGAs used in prototyping. This eliminates the prototype approval process and the board, system, and part qualification processes that other solutions require. The Xilinx innovative testing methodology guarantees timing and functionality, removing any uncertainty or the risk of conversion, especially with increasing design complexity.

Virtex Series EasyPath Device Support

Virtex-II Family	XC2V3000, XC2V4000, XC2V6000, XC2V8000
Virtex-II Pro™ Family	XC2VP30, XC2VP40, XC2VP50, XC2VP70, XC2VP100, XC2VPX70
Virtex-4 LX Family	XC4VLX25, XC4VLX40, XC4VLX60, XC4VLX80, XC4VLX100, XC4VLX200
Virtex-4 FX Family	XC4VFX20, XC4VFX40, XC4VFX60, XC4VFX100, XC4VFX140
Virtex-4 SX Family	XC4VSX25, XC4VSX35, XC4VSX55

Take the Next Step

To test drive the Xilinx cost analyzer – a web-based interactive tool that highlights how the EasyPath option can result in significant cost savings over the ASIC alternatives – please visit www.xilinx.com/easypath or call your local Xilinx sales representative.

	Virtex-4 EasyPath	Structured ASICs	Cell-Based ASICs
Product offering Density Technology Node	High-Density (XC4VFX140) 90nm	High-Density FPGAs 130nm	High-Density FPGAs+ 130nm
Total Cost Vendor NRE % Cost Reduction Tools Hidden Costs Minimum Orders	\$75K 50-80% None** None Low to moderate	\$100K-200K* 50-80% ~\$120K-\$250K* Engineering, Tools, Respin, Delay Moderate to High	\$1M-\$3M* 90% >\$300K* Engineering, Tools, Respin, Delay High
Risk Feature Parity Performance Functionality Architecture	Guaranteed Match Guaranteed Match Guaranteed Match Guaranteed Match	Not Guaranteed Need to re-optimize Converted Converted	Not Guaranteed Need to re-optimize Converted Converted
Incremental Investment Conversion Verification Qualification Board Re-Design	None None None None	Vendor Resources Customer Customer Customer	Customer & Vendor Customer Customer Customer
Lead Times+ To Prototypes To Production Re-order	Not required 8 weeks Days	8-10 weeks 16-20 weeks Weeks-Months	Weeks-Months Months Weeks

* NRE & Cost Data for 1M+ design from SemiView Report by Cary Snyder and Murray Disman, http://www.semiview.com/articles/v1-1_adaptability.php

** No additional tool costs required. Same as FPGA tool costs, which are very low.

+ Lead times for Virtex-4 EasyPath are actual numbers. For others, these are Xilinx estimates based on industry data.

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