

Accelerate Your Time to Market



ISE

ALL THE SPEED YOU NEED

NEW
TO
4.2i

SUPPORT FOR



SUPPORT OF LINUX PLATFORM

Xilinx Integrated Software Environment



Xilinx Integrated Software Environment increases your productivity — and accelerates your time to market



What do you require from your programmable logic design solution? You require a solution that helps you get your design to market as fast as possible. You require fast, high quality synthesis, ultra-fast place and route, and an integrated design environment that accelerates your time to market by streamlining the entire design and verification process. You require a solution that increases your productivity by enabling comprehensive project management and rapid design automation. And you require a well-integrated solution that assures tool interoperability, collaboration among designers, and quality technical support.

Xilinx ISE programmable logic design solutions meet these requirements, enabling you to increase your productivity and accelerate your time to market. ISE — with its powerful ProActive Timing Closure technology — is a combination of technologies that allows you to create designs with I/O speeds up to 3.125 Gbits/sec and internal clock frequencies up to 300 MHz. ISE delivers the benefits of a shrink-wrapped, integrated toolset with the industry's best design tools, plus advanced capabilities that enable you to efficiently create, optimize, and verify modules.

Xilinx ISE is available in four configurations that are optimized to deliver the design capabilities you need at the right price.

- ISE *WebPACK*™ provides the tools necessary to complete any CPLD or low-density FPGA design quickly.
- ISE *BaseX* is an enhanced version of the ISE *WebPACK* tools, supporting the design of additional FPGAs and offering supplementary design capabilities.
- ISE *Foundation*™ is the complete Xilinx desktop design solution, supporting the full range of leading Xilinx programmable logic devices and includes a variety of design, synthesis, and verification technologies all in a complete package.
- ISE *Alliance* includes Xilinx world-class implementation tools — plus the libraries and integration capabilities that enable it to work seamlessly within your chosen design environment.

Xilinx ISE

Xilinx ISE is the next-generation design environment for programmable logic solutions. It contains everything you need to implement a design in one of our many leading programmable logic devices, including the industry's fastest Virtex-II Pro Platform for programmable systems, the powerful Spartan™-IIE FPGAs, and the ultra low-power CoolRunner™-II CPLDs. ISE is optimized to capture, synthesize, and verify your designs faster than ever. With this integrated software package, you get:

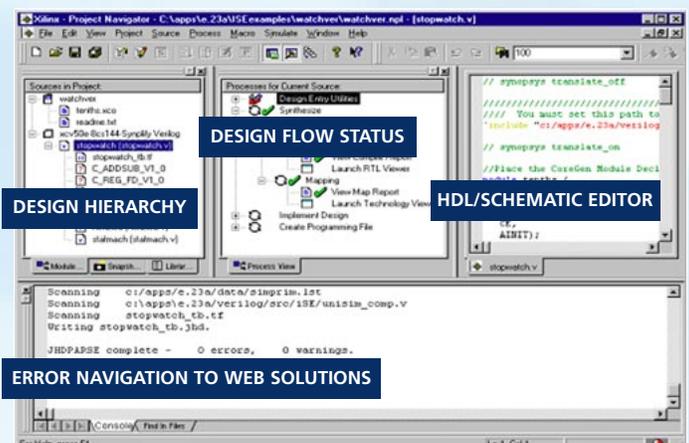
- Easy to use design environment
- Powerful design entry capabilities
- Advanced HDL synthesis engine
- Ultra-fast runtimes with advanced place-and-route technology
- Accelerated verification process

Easy to Use Design Environment

ISE provides an intuitive graphical user interface that steps you through the programmable logic design flow. This interface accelerates the entire design process by providing all the capabilities you need to complete your design, including:

- Design hierarchy browser
- Design flow status indicator
- Error navigator
- Third-party tools integration
- Cross-referenced, customizable graphical windows

With ISE, you can write your HDL code and implement your programmable logic solution all in the same design environment.



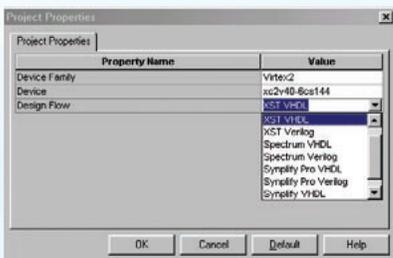
Easy-to-use design environment

Powerful Design Entry Capabilities

The design entry capabilities of ISE can dramatically shorten your design creation process. ISE provides the powerful, industry-proven schematic entry capabilities of the Engineering Capture System (ECS) for schematic or block-level designs. It also delivers an advanced HDL editor with color-coded HDL constructs and ready-to-use HDL templates. Furthermore, ISE includes the Xilinx CORE Generator™ system, which generates and delivers parameterizable cores optimized for Xilinx FPGAs. Use the Xilinx CORE Generator System to design high-density Xilinx FPGA devices and achieve high performance results while also cutting your design time. In addition, ISE provides a robust state machine design capability with Xilinx StateCAD™ technology.

Advanced HDL Synthesis Engine

ISE includes a Xilinx proprietary synthesis engine, Xilinx Synthesis Technology (XST). It also supports the seamless integration of Mentor Graphics' LeonardoSpectrum™, Synopsys' FPGA Express™ and Synplify's Synplify® products. With only the push of a but-



Integrated synthesis environment

ton, you can start any leading synthesis engine within ISE. You can even use multiple synthesis engines to obtain the best-optimized result for your programmable logic design.

Ultra-Fast Runtimes with Xilinx Advanced Place-and-Route Technology

Xilinx ISE gives you the speed you need. With ISE 4, place-and-route times are as fast as 1 minute for a 50,000-gate design, and 20 minutes for our 1 million-gate, XC2V1000 system-level Virtex-II Platform FPGA. ISE 4 contains our new ProActive Timing Closure technology that allows you to realize better clock frequencies. When coupled with the new Virtex-II Pro device family, that means 70% better device performance than the nearest competitive offering for high-density design work.



Accelerated Verification Process

ISE accelerates the design verification process through the inclusion of HDL testbench generation, static timing analysis capabilities, seamless integration with world-class HDL simulators, and an in-system verification technology. The new Xilinx HDL Bencher™ technology is included within ISE, quickly generating timing-constrained self-checking HDL testbenches. The seamless integration of ModelSim® products within ISE delivers the advanced VHDL/Verilog® simulation capabilities necessary in today's design environment. ISE also provides the advanced timing analysis technology with a comprehensive and intuitive interactive control capability. The timing analysis technology of ISE helps you quickly identify timing bottlenecks within your design by cross-probing from timing reports directly into the Floorplanner in ISE and the synthesis tool technology viewers. Xilinx ChipScope™ ILA complements these design automation verification tools by providing an in-system logic analysis capability that provides complete visibility into every node while operating at system speed.

Get on the Fast Track with ISE 4

Xilinx ISE software delivers all the benefits of a complete programmable logic design environment:

- Fast time to market
- Fast clock speed
- Fast design cycle
- Increased engineering productivity

If you want to cut your time to market from months to weeks — and if you want your product to be best in class — there's no time like now to acquire the world's best programmable logic design software from Xilinx, the world leader in programmable logic silicon, software, and support. To find out more, go to www.xilinx.com/ise — or contact any Xilinx Sales Representative.

ISE Device Support Summary

Family	ISE WebPACK	ISE BaseX	ISE Foundation™	ISE Alliance
Virtex™ Series	Up to 300K (Virtex-E and Virtex-II)	Up to 300K	All	All
Spartan II/IIE Families	All	All	All	All
Spartan /XL Families	No	Implementation only*	Implementation only*	All
XC4000™ Series	No	Implementation only*	Implementation only*	All
CoolRunner XPLA3/CoolRunner™-II Families	All	All	All	All
XC9500™ Series	All	All	All	All

* For Spartan, SpartanXL, and 4K device families, ISE supports the implementation by reading in gate-level EDIF netlist.

ISE Product Configuration Summary

	ISE WebPACK	ISE BaseX	ISE Foundation	ISE Alliance
Platform	PC	PC	PC/UNIX	PC/UNIX
HDL Editor	Yes	Yes	Yes	Yes
XST	Yes	Yes	Yes	No
State Diagram Editor	Yes	Yes	PC Only	No
HDL Bencher	Yes	Yes	PC Only	No
Schematic Editor	Yes	Yes	PC Only	No
CORE Generator	No	Yes	Yes	Yes
Modular Design	No	Optional	Optional	Optional
ChipScope	No	Optional	Optional	Optional
MXE II	MXE II Starter*	MXE II Starter*	MXE II Starter*	MXE II Starter*
XPower	Yes	Yes	Yes	Yes

* MXE II supports the simulation of designs up to 1 million system gates and is sold as an option.

Note: All ISE configurations provide seamless integration to Mentor Graphics LeonardoSpectrum and Synopsys' FPGA Express. All ISE configurations except ISE WebPack provide seamless integration to Synplify Synplify/Synplify Pro products.

To learn how to get the highest performance and density from your design, visit the Xilinx Education website at:

<http://support.xilinx.com/support/training/training.htm>

Contact your local Xilinx Distributor to learn more.

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