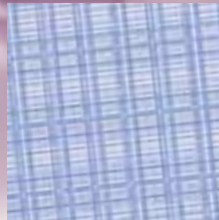# Designer

FPGA Development Software
R1-2003

- Timing Driven Layout
- Static Timing Analysis
- Constraints Editor
- Pin-Locking
- Power Analysis
- Macro Generator
- In-System Verification
- Programming

Actel Designer FPGA Development Software

Thank you for choosing Actel's Designer FPGA development software. Designer software is the most comprehensive and flexible FPGA design software available. Designer software supports all Actel FPGA devices, including the popular ProASIC^{PLUS} Flash reprogrammable devices and the high-speed Axcelerator devices.

Actel Designer software includes all of the tools required for a complete design implementation system. After completing design entry and functional verification using your favorite electronic design package, simply import your Actel netlist into the software. Designer software is compatible with the most popular design entry and verification packages from industry leaders such as Synopsys,® Mentor Graphics,™ Cadence,® Model Technology,™ and Synplicity.®

Actel Designer software provides several powerful tools to facilitate completing your design while reducing your time to market. These tools enable you to lock pins before layout, create design macros, capture and execute design scripts, helping to streamline your design flow and reduce your design time. Designer software also includes static timing analysis and power analysis tools that allow you to do exhaustive verification of your design without having to buy additional tools.

Actel Designer software also provides the flexibility to run on Microsoft Windows, Sun Solaris, or HP-UX operating systems. Designer software can also be enabled from a PC locked license, a security key license, or a network floating license.

If you have purchased the Designer Platinum edition, please register the software ID on the back of this CD package at **http://register.actel.com**.

For users who wish to evaluate the Designer Platinum edition for either Unix or Windows, go to **http://register.actel.com** and request your free 45 day non-programming evaluation license for either a PC-locked system or a networking floating license. If you plan to only use Actel devices that are 50,000 gates and fewer, you can request a free Designer Gold license from the same website.

Actel Designer Software Includes:

- Availability on both Windows and Unix
- Three licensing options: PC node-locked, security key, or single and redundant network floating licenses
- Design state manager
- Timing driven layout
- Pre-layout pin locking
- Static timing analyzer
- Constraints editor
- SmartPower device power analysis
- ACTgen Macro Generator
- Tcl Script recording and execution
- Easy integration into popular third party design tools
- NetlistViewer design schematic viewer
- Silicon Explorer II in-system probing support
- Automatic software update notification
- HTML help system
- Complete User's Guides available on CD-ROM disc
- Actel Digital Library (device datasheets, application notes, etc.)
- Adobe Acrobat Reader

Minimum System Requirements:

Microsoft Windows 98/NT 4.0/ 2000/XP U.S. Version
- 300 MHz Pentium processor
- FAT32 or NTFS file system recommended
- 400 MB available on disk
- 128 MB System RAM*
- CD-ROM drive
- HTML browser
- 800x600 video resolution

Solaris 7, 8
- Sun Ultra processor
- 400 MB available on disk
- 256 MB System RAM*
- HTML browser

HP-UX 11.0
- HP processor
- 400 MB available on disk
- 256 MB System RAM*
- HTML browser

* System RAM requirements increase with the size of the device being targeted. The largest Actel device can require up to 1 GB of memory.

For more information about **Actel Products**, visit our website at
http://www.actel.com

≡Actel

Libero™ IDE and Designer Development Software Feature Comparison Table

			Libero IDE				Designer Software		
Function	Tool	Vendor	Silver	Gold	Platinum	Eval	Gold	Platinum	Eval
Device Support									
Maximum 10k Gate Devices*	All Actel FPGAs	Actel	✔	✔	✔	✔	✔	✔	✔
Maximum 50k Gate Devices*	All Actel FPGAs	Actel		✔	✔	✔	✔	✔	✔
All Actel Devices	All Actel FPGAs	Actel			✔	✔		✔	✔
Features Provided									
Project Manager	Libero IDE	Actel	✔	✔	✔	✔			
Design Entry (HDL)	Libero IDE	Actel	✔	✔	✔	✔			
Design Entry (Schematic)	ViewDraw for Actel	Actel	✔	✔	✔	✔			
Synthesis	Synplify Lite for Actel/ Synplify for Actel	Synplicity	✔	✔	✔	✔			
Simulation	Model*Sim* for Actel	Mentor Graphics		✔	✔	✔			
Test Bench Generator	WaveFormer Lite	SynaptiCAD	✔	✔	✔	✔			
Static Timing Analysis	Timer	Actel	✔	✔	✔	✔	✔	✔	✔
Constraints	Timer	Actel	✔	✔	✔	✔	✔	✔	✔
Auto Macro Generator	ACTgen	Actel	✔	✔	✔	✔	✔	✔	✔
Place-and-Route	Designer Software	Actel	✔	✔	✔	✔	✔	✔	✔
Power Analysis	SmartPower	Actel	✔	✔	✔	✔	✔	✔	✔
Design Schematic View	Netlist Viewer	Actel	✔	✔	✔	✔	✔	✔	✔
STAPL	Designer Software	Actel	✔	✔	✔		✔	✔	
Program File	Designer Software	Actel	✔	✔	✔	✔	✔	✔	
Programming**	Silicon Sculptor II	Actel	✔	✔	✔	✔	✔	✔	✔
In System Probe**	Silicon Explorer II	Actel	✔	✔	✔	✔	✔	✔	✔
In System Programming**	Flash Pro	Actel	✔	✔	✔	✔	✔	✔	✔

* or the smallest member of the device family.
** Requires additional hardware sold by Actel.

For information regarding **Actel Designer FPGA Development Software**, please go to
http://www.actel.com/products/tools/sw.html

Actel Designer Software

Actel Designer software includes powerful built-in capabilities that help enable the designer to quickly complete their FPGA device designs.

PinEdit provides a unique pre-layout pin locking capability that allows designers to consistently define their device pinout and I/O specifications, often times without significantly affecting performance or routability.

SmartPower is a robust design power analysis tool that allows users to determine not only the total power consumption, but also the power usage of individual design elements, while taking into account thermal diffusion through the package.

Timer provides users with a powerful static timing analyzer and timing constraints editor.

Actel ACTgen Macro Generator allows users to generate "correct by construction" optimized logic and memory elements.

Timing Driven Layout is a critical feature that allows users to optimize for the critical path in their design, ensuring that performance goals are met.
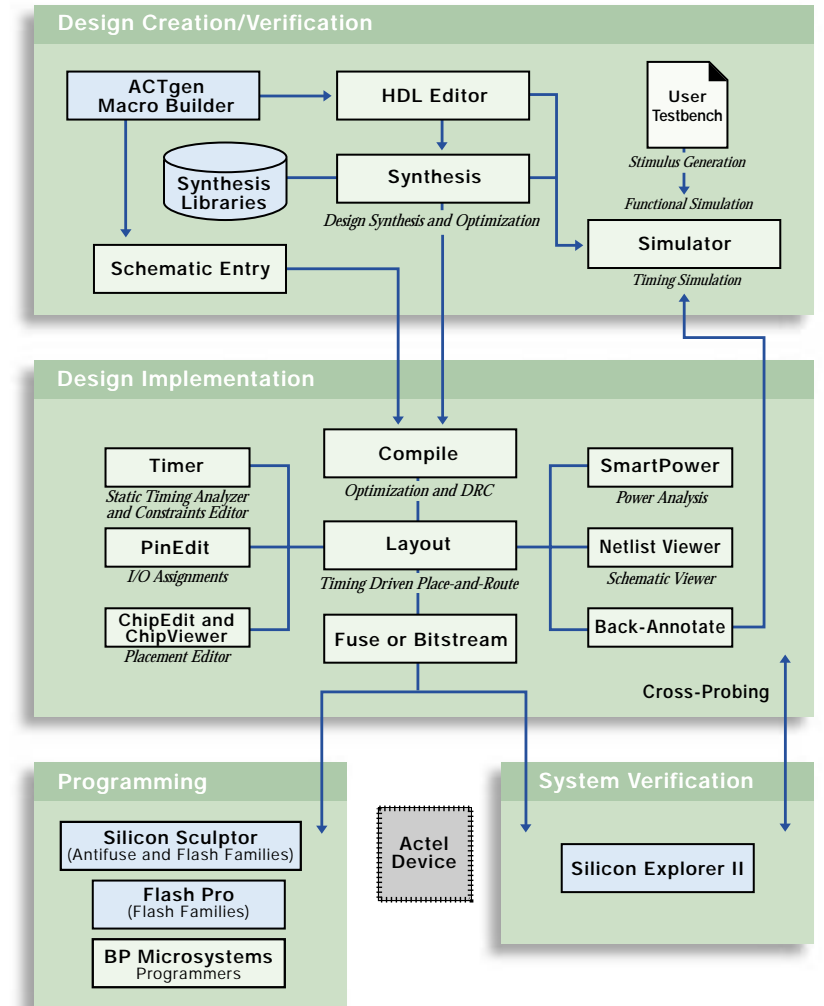
Silicon Explorer software provides the interface to the Silicon Explorer II in-system device probing hardware.

Cross-Probing capability between the Silicon Explorer tool and Designer software.

Third Party Tools that Support Actel Designer Software

Aldec	ACTIVE-HDL
Cadence Design Systems	BuildGate, NC-Sim, Composer, Concept, Concept HDL, ORCAD CIS
Mentor Graphics	Leonardo Spectrum, FPGA Advantage, ViewDraw, SpeedWave, BLAST, TAU
Model Technology	Model*Sim*
SimuCAD	Silos
SynaptiCAD	WaveFormer Pro, WaveFormer Lite
Synopsys	Design Compiler, FPGA Compiler II, PrimeTime, Scirocco, VCS, VSS
Synplicity	Synplify, HDL Analyst

Actel Designer FPGA Design Flow

Actel Designer Software Installation Instructions

Windows – If you have a previous version of Actel Designer software installed, we recommend that you uninstall your existing version.

To install the Actel Designer software, insert the CD-ROM disc into your CD-ROM drive. The Installation Wizard automatically starts. Simply follow the on-screen prompts.

Unix – To install the Actel Designer software, insert the CD-ROM disc into your CD-ROM drive. Mount and execute the install from the CD-ROM disc. Follow the graphical on-screen prompts.

For additional installation instructions, please consult the **Actel Installation and Licensing Guide** included on this CD-ROM disc.

Available Designer Products

Product	Product Code	Device Gates	Programming
Designer Gold	DES-G-PC-N-1YR	50k or less	Yes
Designer Platinum for Windows Node Locked License	DES-PL-PC-N-1YR	All Devices	Yes
Designer Platinum for Windows with Floating License	DES-PL-PC-F-1YR	All Devices	Yes
Designer Platinum for Windows with Security Key	DES-PL-PC-N-1YR-K	All Devices	Yes
Designer Platinum for Unix with Floating License	DES-PL-WS-F-1YR	All Devices	Yes
Designer Platinum Evaluation	DES-PL-E	All Devices	No

For more information about **Actel Designer FPGA Development Software**, call **1.888.99.ACTEL** or visit our website at **http://www.actel.com**

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