



Electronic Design Automation

Cadence Design Systems

Running Solaris™ 10 OS

Achieves Breakthrough Results

Highlights

Company

Cadence Design Systems, Inc.

www.cadence.com

Partner Overview

Cadence helps customers break through their challenges by providing leading-edge electronic design solutions that speed advanced IC and system designs to volume production.

Key Industry Needs

With the growing complexity of semiconductors and electronic systems, you need to pack more functionality into your chips, boards, and systems to achieve breakthrough results—on a platform that can scale today and tomorrow.

Solution

Design engineers have been running Cadence software on SPARC systems and the Solaris OS for years to create innovative products. Now you can experience the same benefits on systems based on AMD and Intel CPU architectures (x64) as well.



Cadence Design Systems is a leading Electronic Design Automation (EDA) technologies and engineering services company that helps its customers break through their challenges by providing leading-edge EDA solutions that speed advanced IC and system designs to volume production. Design engineers use Cadence® software and hardware, methodologies, and services to design and verify advanced semiconductors, printed circuit boards, and systems used in consumer electronics, networking and telecommunications equipment, computer systems, and other high-technology products.

Cadence serves the more than \$1 trillion worldwide electronics market, which is increasingly being driven by consumer-oriented products. The major vertical market segments include computers, wired and wireless communications, and consumer electronics, such as multimedia and personal entertainment devices. The major horizontal segments are systems companies, semiconductor companies, and silicon providers. Cadence is a leading provider of EDA solutions in each of these segments, giving them vast experience in the electronics design industry.

Design engineers have been running Cadence software on SPARC™ systems and the Solaris Operating System (OS) for years, creating innovative products that are flooding the market today. And for good reasons—proven performance, stability, and reliability for more than two decades. Now you can experience the Solaris OS benefits with systems based on the AMD and Intel CPU architectures (x64). In fact, Cadence was one of the first EDA technology vendors to provide broad support for the Solaris 10 OS on x64 systems for both desktop and server applications and supports more than 200 applications for Solaris 10 on the x64 architecture—enabling you to take advantage of the price/performance of these platforms for your EDA needs, with the same stability and reliability of Solaris on SPARC.

Cadence and Sun

Working together for nearly 20 years, Cadence and Sun deliver high-performance design environments and technology innovations to the EDA market. Today, many Cadence technology platforms are developed on Sun hardware, the Solaris OS, and Sun's developer tools. "The robust debugger and analysis tools in Sun Studio 11, along with DTrace, help us develop better, higher performance code," says Tammy Hsu, Senior IT Architect, Platform Engineering, Cadence. Sun's Microelectronics Division uses Cadence tools to design chips for SPARC processor-based products. Working in a tight alliance, Sun focuses on ensuring that Cadence software is optimized for maximum efficiency and reliability for the Solaris OS running on Sun's SPARC and x64 platforms.

Stable, Reliable

One of the most important values of Cadence on Sun is the proven stability and reliability of the Solaris OS. Over the years, Sun has continued to innovate and improve the performance and features of the Solaris OS, while providing binary and source code compatibility.

"We can take advantage of new Solaris features without rewriting our code. We've supported Solaris 10 for over two years. It's very reliable, free, and has a longer lifecycle than Linux, which means fewer support issues for our customers," says Hsu.

With Cadence supporting the Solaris 10 OS on SPARC as well as systems based on AMD and Intel CPU architectures from Sun and other major hardware vendors, your investment is protected with guaranteed compatibility. The same OS runs on all systems, with feature parity between SPARC and other systems.

The availability and reliability of the Solaris OS, combined with Dynamic Trace (DTrace), enable you to find performance bottlenecks much faster. In fact, the platform engineers at Cadence find that DTrace is much more powerful than tools that are available on other platforms, enabling them to quickly trace and resolve issues. “DTrace is not only useful for us in development, it also helps us trace and correct bugs in released software, so our customers win too,” says Hsu.

Greater Flexibility

If you’ve been considering a move to an AMD Opteron or Intel Xeon platform to run Cadence design tools, now you can migrate without learning a new operating system. With Cadence tools running on the Solaris OS, you can process larger and more complex data sets and run more what-if analysis and computationally intensive workloads faster, with increased efficiency. On the other hand, if you’re already on an AMD or Intel platform and want to take advantage of the powerful Solaris 10 OS, now you can. Solaris 10 brings better reliability and stability to your compute infrastructure, providing performance in a better overall package.

If you use Cadence tools that require a compiler, you can download the same robust optimizing compilers that Cadence uses to develop their applications—free of charge. Sun Studio 11 compilers allow you to leverage the latest in parallel programming

and maximize throughput on the latest multicore UltraSPARC™, AMD, and Intel-based systems. Even single-threaded applications gain as the compilers can identify opportunities to parallelize execution and automatically, without source-code changes, produce back-end code to take advantage of this.

Cadence Solutions at a Glance

Low-Power Design

Integrates logic design, verification, and implementation technologies with the Si2 Common Power Format (CPF). So teams can improve productivity, reduce risk, and achieve superior trade-off among timing, power, and area requirements.

Logic Design

Enables logic design teams to effectively design, verify, and implement their RTL block and chip-level designs without the risk of destabilizing their existing design and verification process.

Advanced Verification

Reduces verification risk and injects much needed predictability into project schedules. It unites industry-best practices with verification process automation and management across block, chip, and system levels.

Digital Implementation

Offers an integrated RTL-to-GDSII design environment and provides the speed, ease-of-use, automation, and silicon accuracy designers need to achieve success with extremely complex digital ICs.

Custom Design

Provides an exceptionally fast and silicon-accurate method of designing custom, analog mixed-signal, RF, and custom-digital ICs. It comprises a unified design environment that

blends innovative constraint-driven design capabilities with sophisticated software and flows for design, layout, and verification.

PCB Design

Fully scalable PCB design technologies ideal for everything from the simplest of boards to the most complex, high-speed designs.

Advanced Packaging

A robust set of capabilities target current and future packaging technologies, including wirebond, perimeter array flip-chip, full array flip-chip, and stacked multi-die packages.

Design for Manufacturability

Integrated into design flows to prevent manufacturing effects from impacting digital and custom layouts, analyze systematic and random variability on designs, and optimize the design to maximize yield. Minimizes the impact of random and systematic manufacturing effects on functional and parametric yield.

Success is Built-in

Some of the most innovative products of the past several years have been developed by engineers running Cadence software on SPARC systems and the Solaris OS. Today, you can rely on the Solaris OS’ proven performance, stability, and reliability on systems based on the AMD and Intel CPU architectures—so you can take advantage of the price/performance of these platforms for your EDA needs to help drive your bottom-line success.

Learn More

For more information on Cadence Design Systems and the Solaris Operating System, please see sun.com/cadence

cadence™

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