

# Sun's x86 Workstations for Engineering Design, Visualization, and Software Development

Fast, Powerful, 64-bit Computing

AMD

Sun  
microsystems

Advanced Micro Devices, Inc. (AMD)

The AMD Opteron™ processor powers Sun™ x86 Workstations, delivering high-performance solutions for today's most demanding visualization applications.

#### Key Industries

- Software engineering
- Manufacturing engineering
- Geoscience engineering
- Biomolecular visualization

#### Key Compute Needs

- High-speed compute performance
- High-quality visualization for large data sets
- Simultaneous 32-bit and 64-bit computing

#### Key Business Results

- Simultaneous 64-bit and 32-bit application execution
- Industry-leading visualization workstations
- World-record single and multithreaded benchmarks
- Flexibility in software and operating systems
- Investment protection for future 64-bit applications

#### Solution Features and Benefits

- NVIDIA's award-winning Quadro graphics software
- Industry's largest memory footprint (16 GB) Sun Java™ Workstations W2100z and W1100z
- Choice of operating systems, including Solaris™ or Linux, and support for key third-party applications

Compute-intensive environments such as computer-aided product design, software development, and geoscience engineering demand ever-faster processing of enormous data sets.

#### Visualize the Future with Sun Workstations Featuring the AMD Opteron™ Processor

The move to 64-bit computing means evolving computing infrastructures to keep up with ever-increasing workloads. Managing this transition, and meeting growing challenges to improve time to market and product quality, calls for Sun's leadership in workstation technology. Over 10 years of 64-bit workstation expertise, and more than two million 64-bit workstation units shipped, give Sun the experience to develop a solution to keep you competitive and expand as your business grows.



Sun's x86 AMD Opteron processor workstations deliver high-level performance well-suited for the EDA (Electronic Design Automation), Life Sciences, Defense, Scientific Research, MCAE (Mechanical Computer-Aided engineering), and Oil/Gas industries. (Data provided courtesy of Seisel Inc. Image rendered in Landmark Graphics Geo Probe™.)

## Speed, Performance, and State-of-the-Art Visualization

Sun's x86 64-bit systems for visualization deliver leading-edge computing, adding memory and power beyond the traditional 32-bit computing familiar to design and development professionals. Sun also, however, promotes the 64-bit computing environment — long familiar to scientists — to new performance levels at a lower cost. Sun's x86 systems support 32-bit operating systems and applications, and 64-bit operating systems with 32-bit and 64-bit applications, positioning your team to migrate to newer 64-bit applications currently in development.

### Solution Overview

Leveraging Sun's expertise as the leading workstation vendor, Sun's x86 systems for visualization deliver the industry's largest memory footprint. The high-performing AMD Opteron processor features a 128-bit-wide memory path and three 16 x 16-bit HyperTransport™ technically links. You can retrieve data from the network or local storage, and load, visualize, and analyze massive data sets at optimum speed. The featured Quadro Graphics Accelerator product line from graphics pioneer NVIDIA brings visualization down to the finest detail, producing unprecedented graphics performance on the workstation, including simultaneous multiple displays.

Solutions can be tailored to your needs and budget. Sun hardware platforms support several operating systems, most notably Solaris, maximizing the performance, reliability, scalability, and investment protection customers can get from Sun's x86 platforms. Linux and Windows also run on Sun's x86 workstations. Sun leverages its partnerships

with several certified ISVs to offer the broadest possible software compatibility, so you can improve the performance of existing programs and infrastructure.

### High Performance, Right at the Workstation

Sun's Personal Visualization Systems use the award-winning NVIDIA Quadro family of graphics accelerators for unprecedented realism in viewing applications. Quadro's industry leading subpixel precision, on-chip vertex cache, and fully programmable pixel pipelines work with the systems features to facilitate high-quality visualization of huge data sets in record time.

### Geosciences

Oil and gas exploration and other seismic computing challenges have long resided in the 64-bit environment. Sun brings unprecedented speed and memory capacity to this environment for top-quality visualizations and analysis of massive data sets at a lower cost.

### Biomolecular Sciences

Exponential growth in data load for life sciences and computational biology has dramatically increased demand on processing capacity. Sun x86 workstations for visualization help researchers meet aggressive time targets for compute-intensive projects by handling massive amounts of data while maximizing visualization quality.

### Product Design

Automotive, aerospace, and semiconductor designers who use Computer-Aided Design and Electronic Design Automation add to their toolchest with Sun's AMD Opteron processor systems. These systems increase speed and data volume, improve visualization speed and quality, and offer investment protection, making 64-bit computing affordable while supporting existing 32-bit applications and platforms with vastly simplified migration paths.

## Software Development

Sun's AMD Opteron processor systems cut development time with industry-leading speed and memory capacities while maintaining the most advanced visualization technology available. Supporting 32-bit applications and several operating systems, Sun's AMD Opteron processor system solutions give developers flexibility to simplify the software development cycle. Sun also delivers the power of the four-million-strong developer community working with Java through its Software Developer Network.

### Summary

Sun's x86 systems for visualization bring the speed and power of the AMD Opteron processor and state-of-the-art NVIDIA graphics options to your workstation environment. Make the most of 64-bit computing while gaining flexibility. Whether using Solaris, Linux, or Windows\*; 32-bit or 64-bit applications Sun offers unmatched performance that can work with your current infrastructure and grow with your business.

\*Sun Java™ W1100z Workstation is not Microsoft certified.

Want to learn more about Sun's x86 Systems featuring the AMD Opteron processor? Visit [www.sun.com/amd](http://www.sun.com/amd), or talk to your local Sun representative about scheduling a half-day session to learn more.

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