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**Supercomputing Industry Leaders Choose Mitrionics Platform for FPGA-  
Based HPC Acceleration & Application Development**  
*Supercomputing Performance Now Affordable & Accessible to Broader Market*

**Los Angeles, October 17, 2005** – Mitrionics™, Inc., the technology leader in programming FPGAs (Field Programmable Gate Arrays) for supercomputing software acceleration, today announced the general availability of its revolutionary new Mitrion Platform™ that makes supercomputing performance (10-to-30 times faster than traditional processors) accessible to a broader market of scientists, researchers, and software developers. Already tested and selected by numerous supercomputing industry leaders, the Mitrion Virtual Processor™ and Mitrion Software Development Kit™ allow supercomputing software to be written to run on FPGAs faster, easier, and more affordably than any other development solution. Before Mitrionics, FPGAs had the ability to run supercomputing applications, but it was prohibitively difficult and complex to program them using the traditional existing hardware design tools.

Mitrionics' revolutionary technology has removed the barriers of high cost, extreme complexity, and long development times to make supercomputing performance accessible to entirely new markets and segments of scientists and developers. Using the Mitrion-C Programming Language, a mere 180 lines of code can generate 150,000 lines of VHDL (Very high speed integrated circuits – Hardware Description Language).

“The Mitrion Platform will make a significant contribution to the growth of High Performance Computing by making reconfigurable computing more accessible and affordable for scientists, researchers, and developers,” stated Kevin L. Wohlever, Director of the Springfield Operations for the Ohio Supercomputer Center. “It is exciting to see the successful emergence of FPGAs-based performance acceleration being promoted and adopted by so many companies, organizations, and industry leaders.”

“The Mitrionics Platform has been recognized as a major development breakthrough and selected by the leading supercomputing industry players,” stated Anders Dellson, CEO of Mitrionics, Inc. “This is a very exciting time and the beginning of an entirely new technology and market segment. Now that the main technical barrier in programming FPGAs for supercomputing performance acceleration has been solved, we anticipate the growth in this emerging market to accelerate greatly.”

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### Mitrionics' First Supercomputing Industry Users

The Mitrionics Platform has been selected by many of the world's leading supercomputing organizations to develop FPGA-based supercomputing applications. Its first users include:

- George Mason University
- George Washington University
- McGill University
- National Cancer Institute
- National Center for Supercomputing Applications
- Ohio Supercomputer Center
- Oak Ridge National Laboratory
- Stockholm Bioinformatics Center
- Zuse Institute Berlin

### The Mitrion Platform – Rapid Development for FPGA-Based Supercomputing Applications

The Mitrion Virtual Processor and Mitrion Software Development Kit provide a unique solution that makes it possible to develop supercomputing applications for FPGAs on a true software level. This dramatically reduces the total cost for FPGA-based software acceleration, and more importantly, enables the whole supercomputing industry to benefit from FPGAs.

**Supported on Industrial Strength Platforms:** The Mitrion Platform is currently supported for the following FPGA based systems:

- Cray XD1™ supercomputer
- Nallatech BenDATA™ PCI boards
- SGI RASC™ Technology

More systems are added continuously.

### Fastest Programming Solution for FPGA-Based Supercomputing Applications:

Mitrionics' technology allows software to be developed with an effort comparable to developing applications for OpenMP or MPI. This allows development time to encompass a matter of days or weeks rather than months or years as with other solutions.

**Lowest Total Development Cost:** The significantly reduced number of hours spent programming with Mitrion makes supercomputing performance accessible and affordable for many companies not able to utilize other solutions.

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**Portability:** Migrating your Mitrion application across different FPGA based computers is very easy. This is also the case when upgrading to new FPGA generations: with the Mitrion Software Development Kit, it is simply a matter of a “push-button” re-configuration of the Mitrion Virtual Processor to take advantage of the features of the new FPGA. Hardware design tools would require a complete re-write of the application.

### **Mitrion Virtual Processor – Revolutionary Enabling Technology**

The Mitrion Virtual Processor is a fine-grain, massively parallel, configurable soft-core processor. Software written in the Mitrion-C programming language is compiled into a configuration of the processor. The configured Mitrion Virtual Processor is then downloaded and run on the target FPGA. The processor completely separates the software from the FPGA hardware it is running on. This makes writing software to run in FPGAs quick, easy, and flexible by enabling developers to implement and test algorithms strictly using a high-level software approach.

**The Mitrion Software Development Kit** – Includes a compiler, graphical debugger and code simulator, and processor configurator. A c/C++ library is included for easy integration with the application running on the host CPU. The debugger gives the programmer a hierarchical view of all the parallel processes and their interactions making it easy to find programming errors, performance bottlenecks and inefficient code. All the common debugging tools, such as watchpoints, breakpoints, and call-dependencies are included. The Mitrion Software Development Kit runs under all major operating systems including Linux and Windows.

**Performance Acceleration of 10x to 30x** – The exceptional application performance acceleration achieved through the Mitrion Platform comes from massively parallel execution at the most fine grain level of the algorithm, made possible by the unique features of the Mitrion Virtual Processor architecture. The Mitrion-C programming language and the simulator help the programmer in preserving and revealing parallelism inherent to the algorithm. The Mitrion Virtual Processor is then adapted to optimally utilize the FPGA surface, utilizing processing resources where they are best needed for the specific algorithm.

**Target Industries** – Virtually any industry that currently utilizes supercomputing applications are targets of the Mitrion Platform. Industries that have significant computational needs using regular CPUs, are struggling with a lack of speed, have massive power requirements, or have high costs of building large clusters, will benefit from the Mitrion Platform. Key application areas include genomics, pharmaceutical, oil and gas, manufacturing, aerospace, and financial.

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### About Mitronics

Mitronics, Inc. is a wholly-owned U.S. subsidiary of Mitronics AB based in Lund, Sweden. The company was founded in 2000 and has key industry relationships with Cray, Nallatech, and Silicon Graphics. The Mitrion Platform includes the Mitrion Virtual Processor and Mitrion Software Development Kit which enable FPGAs (Field Programmable Gate Arrays) to be programmed easier and faster than ever before possible, thereby providing customers with revolutionary computer power for their most critical applications. The Mitronics technology makes supercomputing performance acceleration accessible to an entire new market of scientists and developers previously unable to benefit from it because of high prices, complex design skills needed, and extremely long development times. For more information, visit the company Web site at [www.mitronics.com](http://www.mitronics.com), or call 310-558-9495, or email: [info@mitronics.com](mailto:info@mitronics.com).

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