Math Supercomputer—In-A-Box™

What exactly is SEM (Supercomputing Engine for Mathematica)?

SEM is a unique, patent-pending technology produced via a collaboration between Dauger Research, Inc., and Advanced Cluster Systems, LLC.

Closely following the supercomputing industry—standard Message-Passing Interface (MPI), SEM creates a standard way for every Mathematica kernel in the Mac Pro or a group of Mac Pros to communicate with each other directly. In contrast to typical grid implementations that are solely master–slave or server–client (Such as gridMathematica®), this solution instead has all kernels communicate with each other directly and collectively the way modern supercomputers do.

Great Tool for Research: Enabling Mathematica kernels to be harnessed together the way supercomputers are, the fusion of SEM, Mathematica and the Mac Pro workstation enable researchers access to a cost effective, heavy duty research tool for solving math-intensive problems in ways never possible before. Mathematica is now practically a high level language for developing true supercomputing codes!

Expandability: Need more computational power? Need more than 16GB RAM to hold your Mathematica problem? Just connect additional Math Supercomputer—In-A-Box units via a standard Gigabit network. For example, networking 4 Math Supercomputer—in-A-Box workstations produces a powerful 32–CPU, 64GB Distributed RAM Math Supercomputer that reduces execution time by up to 2,700% right at your office!

Who can benefit from a Math Supercomputer—In-A-Box?
Application areas include Simulation, Modeling, Numeric and Algebraic Computations, Visualization, Large–Scale Data Analysis, Cryptography.

Fields of use include Aeronautics, Astronomy, Bioinformatics, Chemistry, Drug Research, Engineering, Finance, Mathematics, Physics, Statistics.

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