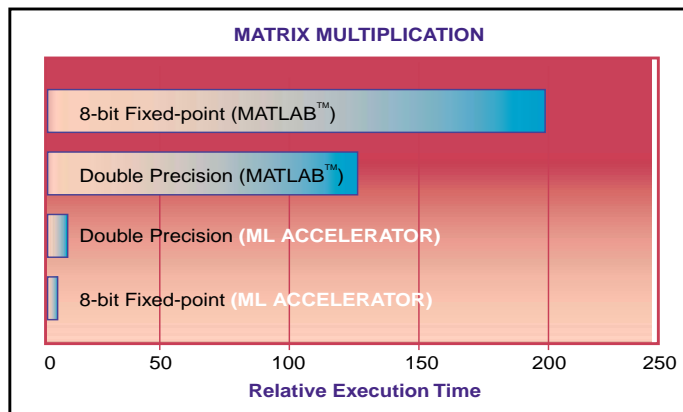




ML ACCELERATOR

ACCELERATE THE SPEED OF YOUR MATLAB™ PROGRAMS

- Compiles MATLAB™ programs to increase performance — 3-40x improvement (10x typical).
- Speeds up both double precision MATLAB™ programs (3-5x) and fixed-point programs written with the Catalytic Compilers FxP Toolbox (10-40x).
- Seamlessly integrated into the MATLAB™ development environment.
- Produces distributable binaries for protecting intellectual property.



The Catalytic Compilers ML Accelerator reduces the execution times of MATLAB programs by a factor of 3-40x (with 10x being typical). Running the optimized output of the accelerator is as simple as typing a normal MATLAB command.

Because the ML Accelerator understands the Catalytic Compilers FxP Toolbox™, it is especially effective on fixed-point MATLAB programs. The accelerator compiles fixed-point arithmetic directly into native integer instructions rather than emulating the fixed-point operations using floating point instructions or function calls. As a result, fixed-point applications get an extra turbo-boost beyond floating point applications.

The speedup you obtain varies by application domain and coding style. Figure 1 gives a graphical example of the speedups obtained

over a range of applications in both double precision and fixed-point execution.

In addition to having a seamless interface to MATLAB from the caller end, the ML Accelerator also provides a seamless interface for calling C procedures from within accelerator call chains. As a result, it is easy to interface to application-dependent routines that will be used in a final implementation, such as table-driven sines, cosines, or square roots. And since the accelerator produces binary libraries for its output, it provides a secure mechanism for distributing intellectual property.

The ML Accelerator, using in conjunction with the FxP Toolbox™ and the ML Quantizer provide a highly effective environment for developing fixed-point MATLAB programs.

For more information about how we can catalyze your design, send email to info@catacomp.com

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