



Acceleration

Accelerated systems have the performance capabilities to tackle the largest of problems.

Acceleration technology can be described as add-on coprocessors or boards that are integrated into systems and bring significant additional performance to that system.

Acceleration Benefits

Today, HPC organizations require substantially more floating point performance to solve real-world problems. ClearSpeed acceleration technology can improve the overall performance of standard x86 systems by inserting add-on accelerator cards to run the most computationally-intensive code.

Good candidates for acceleration have the following characteristics:

- Fortran loops that can be auto-parallelized by the compiler
- CPU time is high while bus usage moderate; number of flops per byte are high
- Floating point codes that could clearly exploit SIMD parallelism
- Large, dense linear algebra operations, for example DGEMM
- 64- or 32-bit floating point

ClearSpeed Acceleration

ClearSpeed accelerators add to the overall performance of a system:

- **Ability to run more jobs simultaneously.** By running the dense compute data on the ClearSpeed Advance accelerator

cards, other jobs can run on the host simultaneously.

- **Address larger problems with the same resources** or increase the ability to complete a large problem faster.

ClearSpeed products are specifically designed to meet the requirements of HPC which include full reliability, IEEE 754 accuracy, 64-bit double precision, low energy consumption and familiar programming environment.

ClearSpeed Developer Program

The ClearSpeed Developer Program provides leading edge developers with the information and tools they need to accelerate their applications.

Membership includes access to:

- Developer website
- Forums
- Technical updates
- Advantageous pricing
- Early access to new software releases
- User group meetings and events

The developer website is home to technical resources and a forum where developers and ClearSpeed gurus can share coding techniques, tips and sample codes; plus developers have the opportunity to provide feedback and ideas for new features.

Join a growing community of software developers who are creating accelerated applications.

Visit developer.clearspeed.com to see the resources available and register to get access to even greater resources and tools.

CLEARSPPEED DEVELOPER PROGRAM

Member Benefits

Developer Forums Participate in community forums where developers exchange coding tips and tricks, sample codes and ideas about software challenges, as well as receive technical updates from ClearSpeed.

Discounts Program members have opportunities to receive advantageous developer discounts when available.

Early Access Developers may be invited to participate in Early Access programs where they would receive privileged access to preview software releases.

Events and Training Events provide opportunities for developers to keep current on technology and to network with colleagues. Receive online training via our training presentations, podcasts and webinars.

Feedback Developer feedback is valued and will be considered for future features of the ClearSpeed Developer Program and product line. Developer's can send in feedback via the Contact Us page on developer.clearspeed.com.

Reference Library The reference library includes resources such as: Frequently Asked Questions, User Guides, Performance and White Papers, and Reference Manuals.

Support The Developer forums offer a great deal of support, but if you need more, technical support may be purchased.

Register now at developer.clearspeed.com!