

AXISLIB

DSP & Math Libraries for deployed High Performance Computing

Features

- 500+ DSP and Vector Math Functions
- VSIPL API Core 1.0 +
- RSPL API for maximum performance
- Generic C libraries
- Development and production library builds
- Many hand optimized functions.
- Target platforms:
 - Intel® 32- and 64-bit multi-threaded, multicore CPUs with SIMD extensions for Windows, LINUX and VxWorks™.
 - NVIDIA CUDA many core GPUs for 32- and 64-bit LINUX and Windows™
 - Power e600 AltiVec for VxWorks™, LynxOS and LINUX

AXISLIB from GE Intelligent Platforms is a family of high performance DSP and math libraries that deliver world class performance for size, weight and power (SWaP) constrained mission computing platforms.

Portability

The Vector Signal Image Processing (VSIPL) open standard application programming interface (API) facilitates code portability across multiple CPU generations and architectures to support technology refresh during the entire program life cycle.

Performance

GE's RSPL API gives the programmer more control with lower CPU overheads to meet very challenging performance objectives.

Benchmarks

GE can supply performance benchmarks for a suite of common DSP functions on the latest Intel, GPGPU and PowerPC platforms.

Reduced cost of ownership

AXISLib gets the best performance out of the deployed system without the need to hand craft libraries for each processor architecture thereby reducing project work load, cost of ownership and shortening time to solution.

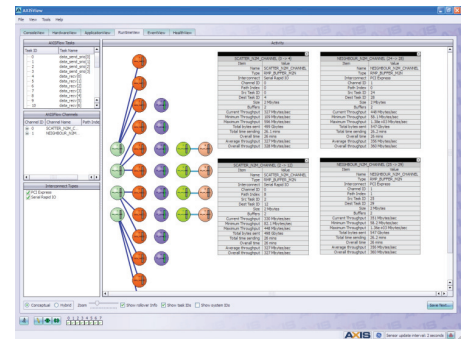
Flexibility & performance tuning

AXISLib delivers more than 500 standard functions and our team of expert mathematicians and programmers can offer optimization services to meet the most demanding customer requirements.

AXIS Advanced Multiprocessor Integrated Software

AXISLib DSP & Math libraries can be used on their own, or within GE's integrated multiprocessor application development framework that includes AXISFlow inter-processor communication (IPC) middleware and AXISView integrated GUI. These tools enable fast prototyping and application scaling across multiple CPUs, boards and system fabrics.

AXISView screen shot



GE single board computers (SBCs) and multiprocessing boards leverage the latest high performance computing (HPC) architectures and switched fabrics onto rugged COTS form factors such as 3U & 6U OpenVPX. These platforms allow system integrators to move desk top applications into mission critical pay loads to meet expanded operational requirements for a range of intelligence, surveillance and reconnaissance (ISR) platforms.

Typical applications include radar, sonar, image processing, SIGINT, ELINT, EW and counter measures for deployed airborne, ground and naval platforms.



AXISLIB – DSP and Math Libraries

MAGIC1 Rugged GPGPU Platform



GE Intelligent Platforms' rugged MAGIC1 GPGPU processor running AXISLib DSP routines is an ideal platform to support expanded ISR mission capabilities across a wide range of SWaP sensitive applications.

AXISLIB Product Family

AXISLIB optimized DSP & math libraries

AXISLIB-x86 for Intel Architecture

AXISLIB-GPU for NVIDIA CUDA

AXISLIB-PPC for Power Architecture

Ordering Information*

Intel Architecture

AXISLIB-X86-01M SW Maintenance Agreement

NVIDIA CUDA GPU

AXISLIB-GPU-01M SW Maintenance Agreement

Power Architecture

AXISLIB-PPC-01M SW Maintenance Agreement

* This software is licensed for use on GE Intelligent Platforms COTS single board computers (SBCs) and Multiprocessor (MP) platforms. The software is delivered under a yearly renewable software maintenance product stream providing updates and support during the life of the agreement. Run-time licenses are charged on a per processor node basis for the target SBC or MP platforms. Please contact GE Intelligent Platforms sales for more details.

About GE Intelligent Platforms

GE Intelligent Platforms, a General Electric Company (NYSE: GE), is an experienced high-performance technology company and a global provider of hardware, software, services, and expertise in automation and embedded computing. We offer a unique foundation of agile, advanced and ultra-reliable technology that provides customers a sustainable advantage in the industries they serve, including energy, water, consumer packaged goods, government and defense, and telecommunications. GE Intelligent Platforms is a worldwide company headquartered in Charlottesville, VA and is part of GE Home and Business Solutions. For more information, visit www.ge-ip.com.

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