

AXISLIB

DSP & Math Libraries for deployed High Performance Computing

AXISLIB from Abaco Systems 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

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

Benchmarks

Abaco 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.

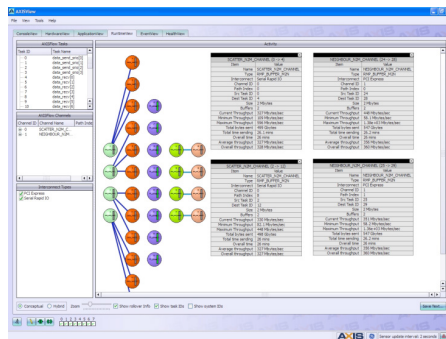
Flexibility & performance tuning

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 Abaco's integrated multiprocessor application development framework that includes AXISFlow interprocessor 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



Abaco 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.

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

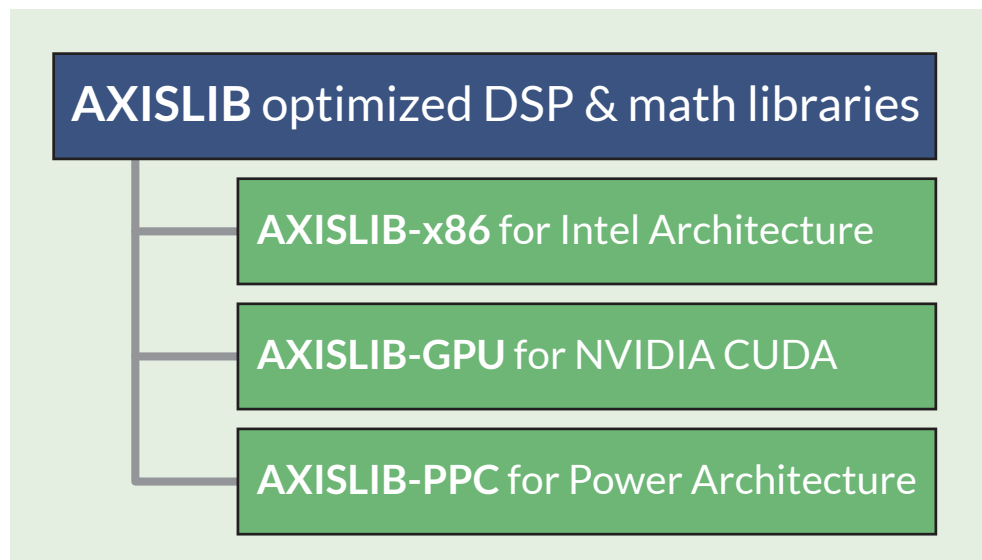
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MAGIC1 Rugged GPGPU Platform

Block diagram



Abaco Systems' 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.



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 Abaco Systems 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 Abaco Systems sales for more details.

WE INNOVATE. WE DELIVER. YOU SUCCEED.

Americas: 866-OK-ABACO or +1-866-652-2226 **Asia & Oceania:** +81-3-5544-3973

Europe, Africa, & Middle East: +44 (0) 1327-359444

Locate an Abaco Systems Sales Representative visit: abaco.com/products/sales

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