

AXISPro

Advanced Multiprocessor Application Development Environment

The AXISPro advanced multiprocessor application development environment from Abaco's business enables rapid development of multi-core applications aimed at size-, weight -and power- (SWaP) sensitive applications.

The AXISView GUI provides a user friendly interface to create, configure, build, load, run, scale, visualize and tune multiple applications across distributed multi-threaded, multi-core, multi-node platforms from a single user interface .

Message Passing Interface (MPI)

The new AXISmpi library provides a performance-optimized MPI implementation with the industry standard API making it compatible with a wide range of software development and case analysis tools from the wider High Performance Computing (HPC) community.

Developers can now choose the AXIS IPC middleware that best suits the needs of their platform while getting best performance per watt out of the embedded system whether running a Linux® or Windows® cluster or a VxWorks® multiprocessor system.

The AXISFlow high performance inter-process communication (IPC) middleware includes 42 user APIs offering a light weight, simple to use library that abstracts data movement from the complexities of the underlying hardware and software drivers.

AXISView now supports MPI, providing developers with the opportunity to run and visualize both MPI and AXISFlow applications concurrently, thus providing additional choice and flexibility to meet demanding customer requirements.

Simplicity, Scalability and Performance

System integrators can optimize and scale their application across Abaco's 3U and 6U OpenVPX HPEC solution sets that include the latest 2nd, 3rd and 4th generation Intel® Core™ i7 multicore CPUs, Ethernet , InfiniBand® and PCIe™ data and expansion planes, NVIDIA® GPGPUs, and a range of I/O modules including sFPDP and high resolution A/D interfaces.

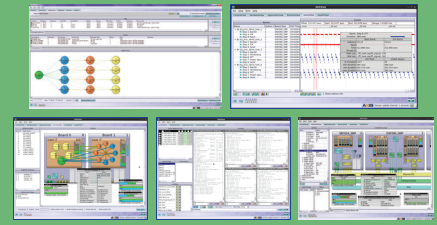
Code portability across multiple platforms

AXISmpi and AXISFlow enable application portability across multiple IPC fabrics including InfiniBand, Ethernet (1, 10 and 40Gigabit) and PCIe as well as platform architectures and operating systems such as Intel, NVIDIA GPGPU and Power Architecture™ running Linux, Windows or Vxworks.

Quick Start Examples and Demos

The AXISPro package contains a comprehensive set of example applications demonstrating the use of various features of the AXISFlow and MPI layers. It also includes a signal processing demonstration application with re-usable GUI display.

AXISView Integrated GUI



AXISmpi or AXISFlow Inter-process Communication (IPC)

System Visualization

AXISView GUI

Multiprocessor management

- Multi-board system visualization
- Rapid application development
- Runtime performance analysis
- Post-run event analysis

Inter-process Communication

AXISmpi or AXISFlow High Performance Middleware

- New optimized MPI IPC middleware or
- AXISFlow IPC with 42 APIs
- Runs on Linux®, Windows® and VxWorks®
- OFED RDMA for 10Abaco & InfiniBand® (Linux and Windows)
- Hardware multicast over IB & 10Abaco

Quick Start Application Examples

- AXIS Signal Processing Demo (included)
- AXIS Image Processing Demo (contact Abaco)

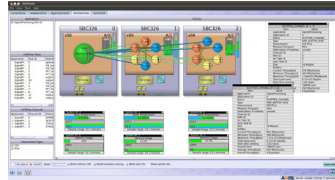
Related software sold separately: AXISLib-AVX 2.0 / AXISLib-PPC / AXISLib-GPU

- 600+ DSP and math function libraries
- VSIP Core 1.0+ profile & Abaco RSPL APIs
- Runs on Linux, Windows and VxWorks
- Intel® Core™ i7 with AVX 2.0 support, NVIDIA™ GPU or Power Architecture™
- See AXISLib data sheet for additional information

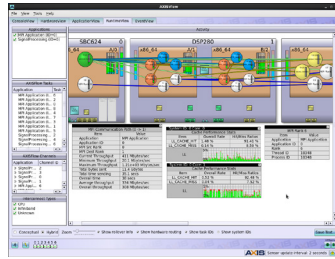
AXISPro Advanced Multiprocessor Application Development Environment

- Run multiple applications over multiple networks concurrently
 - Multi-core, multi-threaded and multi-channel inter-process communication
- Distributed task and data flow scaling:
 - Map threads to system resources to meet timing and performance requirements
- System visualization and management:
 - Optimize for best SWaP and performance headroom requirements
- Quick start application examples:
 - AXIS signal processing demo included
 - AXIS image processing demo (contact Abaco)

Block diagram



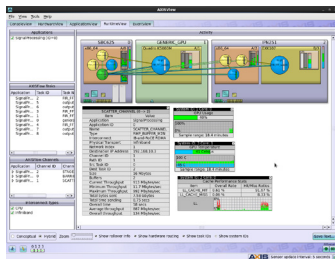
AXISFlow signal processing application running 3U VPX system over PCIe



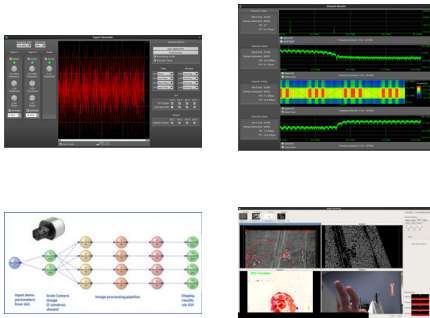
Different AXISFlow and AXISmpi applications running concurrently on Intel Core i7 using RDMA over InfiniBand



HardwareView showing multi CPU and GPU system



RuntimeView showing tasks utilizing both the CPUs and GPUs in a system



Ordering information

AXISPRO-01M
AXISPRO-YR

AXIS Software Maintenance Agreement
AXISFlow Software run-time license

Get a free evaluation copy of Abaco's AXISLite demo by contacting your local sales rep

WE INNOVATE. WE DELIVER. YOU SUCCEED.

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