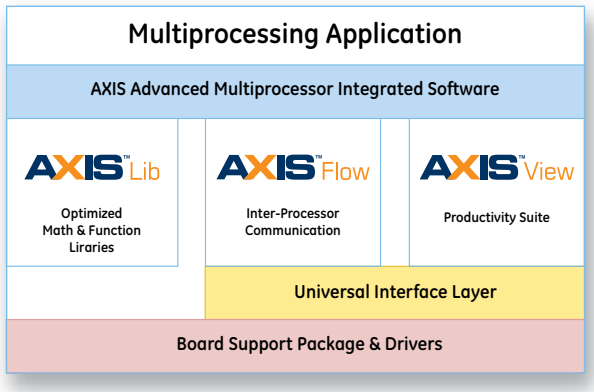
GE
Intelligent Platforms

AXIS™ Multicomputer



AXIS Overview

AXIS Advanced Multiprocessor Integrated Software

Features

Multiprocessor Application

- AXIS's integrated modular architecture provides libraries and GUI tools to greatly accelerate multi-core and multiprocessor application development.

Advanced Multiprocessor Integrated Software

- Interprocessor Communications
  AXIS offers seamless scalable processing elements, high throughput, low latency communications between tasks, processors, boards and systems. It is processor and RTOS independent.
- Multiprocessor Productivity Tools Visualization and automation tools maximize user efficiency, while monitoring and tracking tools optimize system performance.
- Optimized High Performance DSP Libraries. The AXIS suite includes the VSIPL Industry Standard compatible RSPL Signal and Vector processing library.

Universal Interface Layer

- AXIS provides a hardware and operating system abstraction layer, with a common interface across GE Embedded Systems hardware, and independent of the RTOS.

Real-Time Operating Systems*

- AXIS supports industry standards (VxWorks®, LynxOS®, INTEGRITY, Linux®).
- Board Support Package
  The low level hardware abstraction supports onboard peripherals and enables RTOS features.
- HardwareAXIS hardware supports GE Embedded Systems boards. Contact the factory for the latest list.

Overview

AXIS Advanced Multiprocessor Integrated Software from GE Intelligent Platforms accelerates the development and production deployment of the most demanding signal processing applications. Developed for multiprocessors systems, AXIS provides:

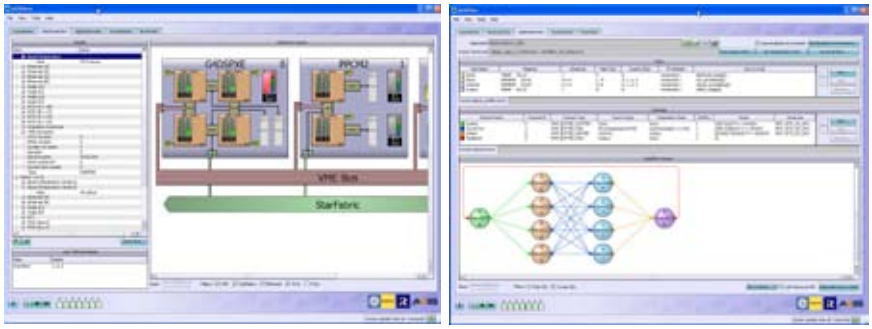
- Fully Integrated Software Modules
  AXIS shortens development times, reducing project costs and accelerating time to market. The modular architecture puts the control in the engineer's hands.
- Performance
  The software environment offers high throughput, low latency, reconfigurable communications able to support the most demanding of data intensive applications. Optimized libraries deliver the maximum performance for the specific application.
- Scalability
  The AXIS environment offers seamless migration from development to production deployment. Engineers can reconfigure or scale the system depending on the application demands, adding or subtracting processing elements as needed.
- Portability
  AXIS is processor and RTOS independent, supporting industry standards and providing future flexibility and peace of mind. The software environment supports interoperability between GE Embedded Systems products today and in the future, with seamless integration between the single board computer (SBC), signal processing and sensor I/O.
- Simplicity
  The integrated environment ensures ease-of-use while hiding the complexities of the underlying hardware architecture. The system visualization increases productivity and performance, while positionless communications provide consistency between tasks, processors, boards and systems.

AXIS Overview - AXIS Advanced Multiprocessor Integrated Software

AXIS Multicomputer
Open Architecture, COTS Multiprocessor Solutions

Customer Application
AXIS Advanced Multiprocessor Integrated Software
Universal Interface Layer (UIL)
Board Support Package (BSP)
Built-in-Test (Configurable POST)
I/O, SBCs, Multiprocessors, Fabric Switches

Sample Screenshots of HardwareView and ApplicationView Tools



AXIS Advanced Multiprocessor Integrated Software provides all the tools a developer needs to maximize performance, increase productivity and reduce time-to-solution under one integrated framework. All software modules can be used independently or in conjunction with each other.

The AXIS Environment

AXISFlow - Interprocessor Communications

Provides abstraction of data movement from hardware and operating system

DMA Support	High sustained data throughput with minimal processor overhead. Allows for concurrent data movement and processing, maximizing application performance
No-copy Transfers	Pointer passing for fast on-processor messaging
Data Manipulation	Data striding, scatter/gather and multicast channels supported. Easily integrates data reorganization into the application
Positionless Methods	Application is agnostic to inter/intra board transfers and underlying transport mechanisms
Seamless Integration	Supports GE single board computers, multiprocessor DSP boards and I/O modules

AXISView - Multiprocessor Productivity Tools

Integrates system development and debug environment

ConsoleView	Provides a tool for managing multiple consoles for multiple processors. Allows common commands to be targeted to sub-groups of the multiple processors
HardwareView	Automatically determines multiprocessor configuration, and displays graphical view
ApplicationView	GUI allows developer to build pictorial representation of application, route interprocessor communication channels and auto-generate routing tables. Automatically generates application launch code.
RuntimeView	Graphical visualization of processor load and interprocessor bandwidth utilization
EventView	Synchronized, system wide visualization of operating system events for real-time tuning of multiprocessor applications

AXISLib - Optimized High Performance DSP Libraries

Provides maximum math performance with choice of API

Comprehensive Functionality	Hundreds of math, signal and vector processing algorithms. Minimal overhead, high sustained processing rates. Minimal overhead, high sustained processing rates
Maximum Performance	Optimized for AltiVec and PowerPC pipeline
VSIPL API	VSIPL library. Core 1.0 implementation with 512 functions. Industry standard API for customers requiring portability
RSPL API	GE API for customers requiring maximum performance

GE Intelligent Platforms Contact Information

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Global regional phone numbers are listed by location on our web site at **www.ge-ip.com/contact**

www.ge-ip.com

Advanced Multiprocessor Integrated Software AXIS™

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