



CRX800

23 Port VITA 41.2 Serial RapidIO Switch

Features

- Serial RapidIO (sRIO) support:
 - 18 payload ports, 4 inter-switch ports
 - 1 fiber optic front panel port (optional)
 - All ports are x4 lanes
 - All lanes are 1, 2.5 & 3.125 GHz capable
- Switch management:
 - MPC8548 management processor
 - x4 Serial RapidIO interface to switch fabric
 - Gigabit Ethernet port to front panel
 - RS232 serial ports to front panel
 - I2C bus interface to all switch nodes
- Form factor
 - Rugged 6U VITA 41.2 form factor for air, spray and conduction cooled systems
- Software
 - VxWorks BSP with API to switch management layer
 - GE Built-In-Test (BIT) for PowerPC
- Optional Switch Management Module

CRX800 is the world's first COTS, VITA 41.2 compliant, Serial RapidIO (sRIO) switch card from GE Intelligent Platforms aimed at rugged, deployed defense and aerospace applications.

Designed to support a wide range of multi-processor system configurations, CRX800 offers un-paralleled flexibility and performance by exploiting the 80 Gbits/s aggregate bandwidth of Tundra's Tsi578 third generation switch.

CRX800 supports the full VITA 41.2 compliment of 18 payload and 4 inter-switch ports and goes further to support the full system bandwidth from chassis to chassis via an optional, x4, sRIO fiber optic front panel interface.

All Serial RapidIO ports are x4 lanes with all lanes capable of up to 3.125 GHz operation.

Layered software support for GE's Built-In-Test (BIT) for PowerPC® and VxWorks® board support package (BSP) with an open API to the switch management layer is standard.

CRX800 is designed to work with our market leading DSP220 VITA 41.2 quad MPC8641D multiprocessor scaling to 72 processing nodes per enclosure.

Multi-processor support includes our AXIS Advanced Multiprocessor Integrated Software suite of fully integrated modules for system development, visualization and deployment running on DSP220 with support for the sRIO system fabric.

AXISView provides an intuitive GUI for system visualization and productivity tools that greatly reduce development time and shorten time to market.

AXISLib VSIPL and RSPL optimised math and function libraries provide a wide range of optimized functions for the PowerPC AltiVec platform.

AXISFlow supports high throughput, low latency, inter processor communication (IPC) across all system nodes to maximize system performance and flexibility.



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Specifications

Form factor

- 6U VITA 41.2

sRIO Fabric VITA 41.2 support

- Ten Tundra Tsi578 switches
 - Eighteen x4 payload ports
 - Four x4 inter-switch ports
 - One optional x4 port to fiber optic I/F
 - One x4 port to management CPU
 - Up to 3.125 GHz operation per lane

Management Processor

- MPC8548 single core PowerPC

Memory

- 256 MBytes SDRAM
- 128 MBytes FLASH

Network

- One Gigabit Ethernet port to front panel

Serial

- Two RS232 ports to front panel

Ruggedization

- Levels 1 to 6

Software

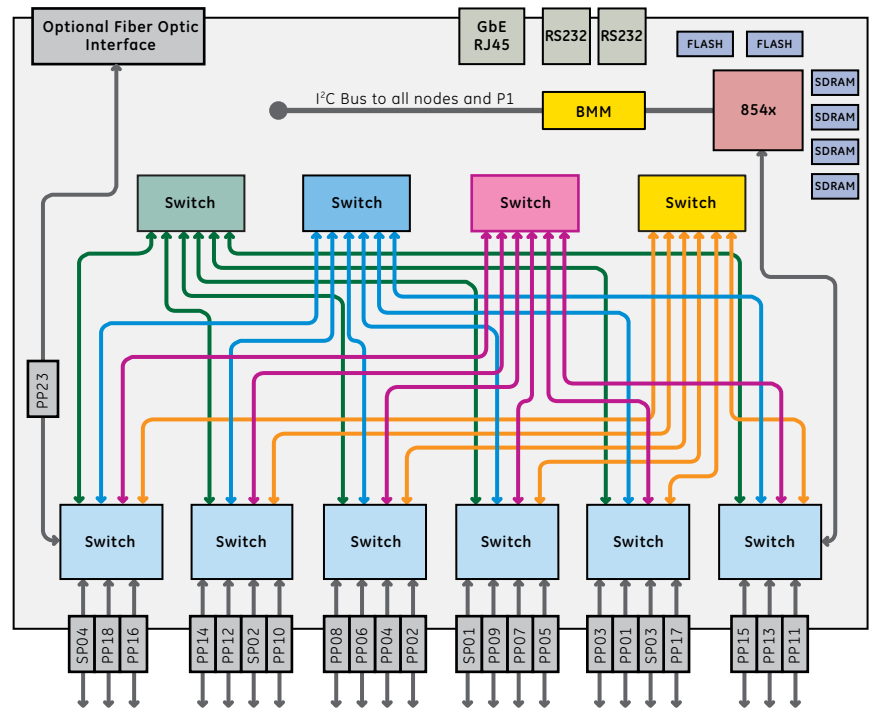
- GE Built-in-Test (BIT)
- VxWorks BSP with switch management API
- AXIS Advanced Multiprocessor Integrated Software compatible

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

Block Diagram



Ordering Information

CRX800-10112*

6U VITA 41.2 compliant Serial RapidIO switch card. Level 1 build with 18 payload and 4 inter-switch ports.

*Build option with x4 sRIO front panel fiber optic interface is available. Standard configuration includes BIT and VxWorks 6.x Boot ROM. VxWorks BSP and optional switch management application must be ordered separately.

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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