

StarSwitch2

StarFabric Interconnect Board

Features

- Four switched StarFabric ports
- Full StarFabric connectivity
- VME interface offering VME access to both PMC sites
- Efficient handling of byte-level I/O
- 2x independent 64-bit/66 MHz PMC sites
- Full 64 bit PMC I/O available via P2/P0 from both PMC sites
- Semi-redundant architecture for restricted maintenance applications
- Air- and conduction-cooled builds

Software

- AXIS Advanced Multiprocessor Integrated Software
- GE Fanuc Built-In-Test (BIT) for PowerPC on the processor cards
- Processor card BSPs for VxWorks & LynxOS with bundled driver support for StarSwitch2

StarSwitch2 is a multi-purpose switch and PMC carrier card that can support multiple 6U payload boards and two PMC I/O cards.

With four StarFabric ports via the P0 connector providing high bandwidth switched fabric interconnect, StarSwitch2 can form the heart of a multi-board system harnessing the compute power of GE Fanuc's flagship 6U VME dual and quad Freescale PowerPC® AltiVec processors boards such as PPCM2 and G4DSP-XD3.

Data flow from the PMCs can be mapped to the processor payload cards over VME or PCI/StarFabric supporting a variety of data and management plane configurations.

StarSwitch2 is available in five ruggedization levels for both air- and conduction-cooled systems.

Layered software support for industry leading COTS real-time operating systems is bundled with the processor card BSPs and Built-In-Test (BIT) for PowerPC.

AXIS Advanced Multiprocessor Integrated Software provides a suite of fully integrated modules for system development, visualization and deployment.

AXISView provides an intuitive GUI for system visualization and productivity tools that greatly reduce development time and 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 increase flexibility in the design of the most demanding signal and data processing applications.

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Specifications

Processor

- Form Factor – 6U VME

StarFabric Switch

- StarGen SG1010 six port StarFabric switch

StarFabric Bridge

- StarGen SG2010 StarFabric-to-PCI bridge (64-bit/66 MHz)

VME64 Interface

- Tundra Universe IID VME bridge. Provides IEEE-1014-1987 DBT master/slave, interrupter

PCI-to-PCI Bridges

- PLX6540. PCI 64-bit/66 MHz working non transparently to isolate PMC traffic

P0 StarFabric

- 4 switched StarFabric ports to P0

PMC Sites

- 2x 64-bit/66 MHz

Program Interrupts CPLD

- Xilinx XC95144XL-TQ144. Provides flexible PSU/reset sequence, interrupt mapping and access to network statistics registers

Weight

- 378 grams : level 1
- 532 grams : level 4

Power

- 18 watts using StarFabric only
- 20 watts using StarFabric + VME (DMAs)

Operating Environment

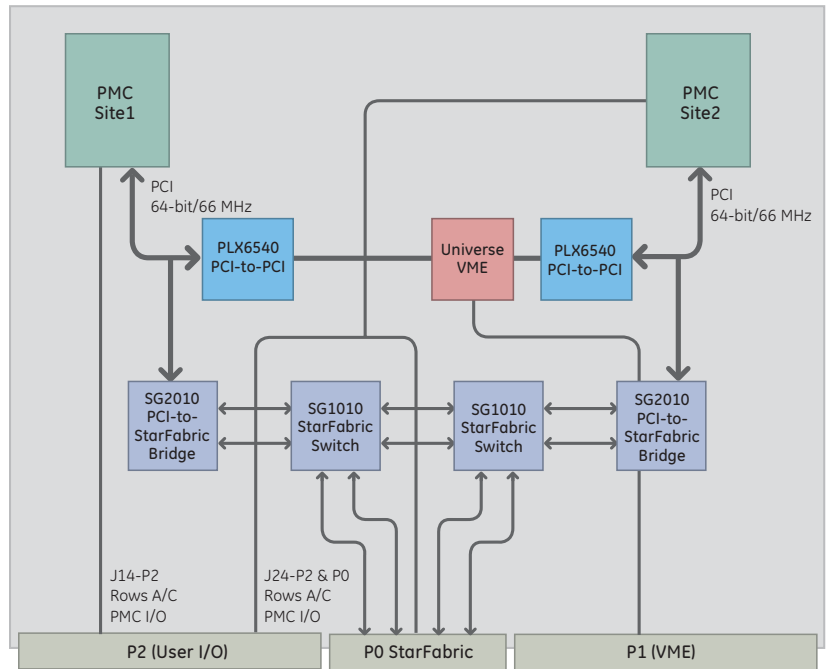
- Build levels 1 to 5 for both air and conduction cooled extended shock and vibration environments.

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

- STARSW2-11:** 6U StarFabric Switch card with two PMC sites. Comprises 2x SG1010 StarFabric Switches, 2x SG2010 StarFabric Bridges, 1x Tundra Universe VME interface, 2x 64/66 PMC sites. Provides 4x fully switched StarFabric ports to P0, StarFabric access to both PMC sites and access to VME from both PMC sites. Level 1 air cooled build.
- STARSW2-21:** As above level 2 air cooled build.
- STARSW2-31:** As above level 3 air cooled build.
- STARSW2-41:** As above level 4 conduction cooled build
- STARSW2-51:** As above level 5 conduction cooled build
- STARPIO-11:** StarSwitch P2 transition module. Provides 4x RJ45 connectors for routing the StarSwitch's four StarFabric ports, through routing of all 64 PMC I/Os from both PMC sites and provides connectivity for direct off-board interrupts. Level 1 only

About GE Fanuc Intelligent Platforms

GE Fanuc Intelligent Platforms is a leading global provider of embedded computing solutions for a wide range of industries and applications. Our comprehensive product offering includes many types of I/O, single board computers, high performance signal processors, fully integrated, rugged systems including flat panel displays, plus high speed networking and communications products. The company is headquartered in the U.S. and has design, manufacturing and support offices throughout the world. Whether you're looking for one of our standard products or a fully custom solution, GE Fanuc Intelligent Platforms has the breadth, experience and 24/7 support to deliver what you need. For more information, visit www.gefanuc.com.

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Additional Resources

For more information, please visit the GE Fanuc Intelligent Platforms web site at:

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