GE
Intelligent Platforms

SBC610

6U VPX Single Board Computer

Features

- Freescale 8641D/8640D dual core PowerPC®
- Highly flexible I/O capability
  - Two XMC/PMC sites
  - AFIX daughter card site
  - Gigabit Ethernet, USB2.0, serial, SATA
  - VME with 2eSST support
- sRIO and PCI Express fabric enabled
- Support for multiple operating systems and GE Deployed Test software
- Fully supported by GE AXIS integrated tools and libraries (AXISFlow, AXISView, AXISLib)

The SBC610 single board computer sets the standard for deployed COTS processors aimed at rugged defense and aerospace applications.

A member of GE's new 6U VPX product family, the SBC610 offers unrivalled I/O flexibility with its support for both on-board and plug-in I/O via its two XMC/PMC sites and unique AFIX site. It enables a range of scalable solutions from single board systems to large multi-processor systems, offering both high speed fabric connectivity (sRIO and PCI Express) and legacy connectivity (VME).

The SBC610 is fully supported by GE's market-leading AXIS Advanced Multiprocessor Integrated Software tools and libraries, and is a building block within GE's new AXIS MultiComputer family, which provides a range of multiprocessor configurations with the flexibility to integrate system specific I/O that caters for legacy as well as future requirements.

SBC610 software support includes GE's comprehensive Deployed Test Software (BIT and BCS) and OS support for VxWorks®, VxMILS, Open Source Linux®, with other popular Operating Systems such as LynxOS® and Integrity planned.

SBC610 6U VPX Single Board Computer

Specifications

Processor
- MPC8641D @ 1.33 GHz
- MPC8640D @ 1.0 GHz

Main Memory
- Up to 2 GBytes DDR2 SDRAM on dual memory controllers

Flash
- Up to 1 GByte with protected BANC Flash

Fabric
- Four x4 Fabric ports (two Serial RapidIO and two individually configurable as Serial RapidIO or PCI Express)

Network
- Two Gigabit Ethernet ports

General I/O
- 2x SATA, 2x USB2.0, 6x Serial ports (2x RS232, 4x RS232/422/485), Discrete Digital I/O.

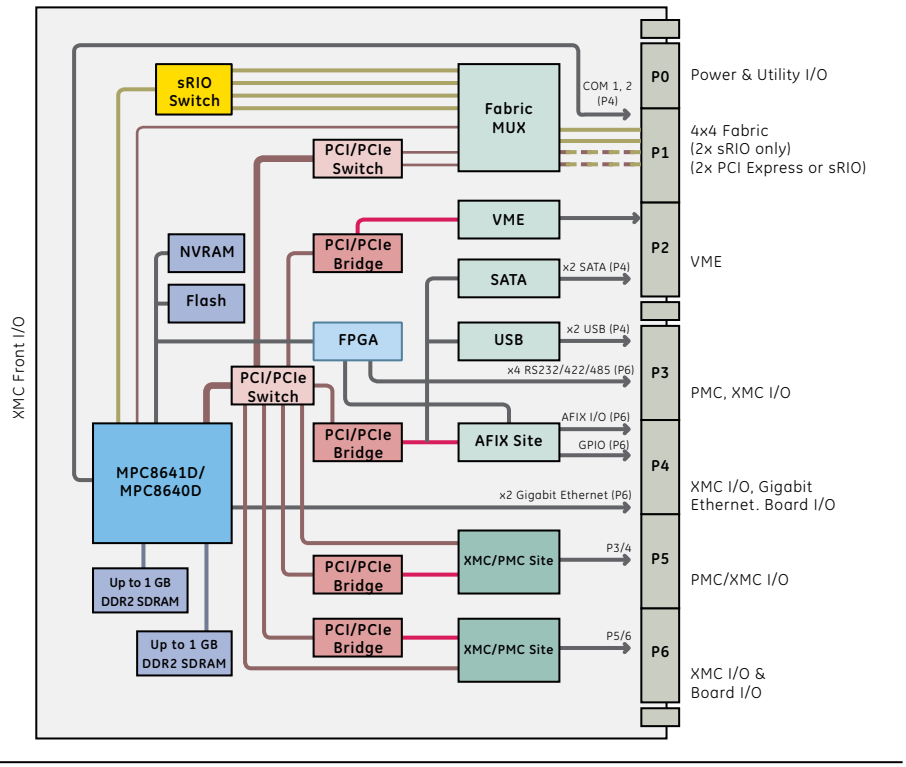
XMC/PMC sites
- x8 PCI Express (VITA 42.3)
- 64-bit PCI-X at up to 133 MHz to PMC

VME
- VME64x interface with 2eSST support

AFIX site
- Supports the GE range of AFIX daughter cards including Flash memory (AFIXM), MIL-STD-1553B (AFIX1553) and SCSI and Graphics (AFIXSG)

IPC Messaging
- Dedicated inter-node, inter-board synchronization and interrupts

Block Diagram



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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