THEMIS

PRODUCT FAMILY FEATURES

High-Performance

- Intel® 2.13 GHz Quad Core Xeon processor

- Up to 4 GBytes DDRII SDRAM soldered on board

- Up to 12 GBytes memory with SoDIMM expansion

- Error Detection/Correction: 8-bit ECC to main memory provides single error correction and double error detection.

- CompactFlash™ Type I or II Socket

- Vita 41 compliant: Dual Gigabit Ethernets off P0

Software Support

- Linux®

- Microsoft Windows®

VME Interface

- 2eSST

- Tundra Tsi148 VME64 interface

- Injectors/Ejectors: VME64 and traditional VME available

XV1

Quad Core 6U VMEbus Computer

OVERVIEW

The Themis XV1™ Computer is a high-performance 6U VMEbus computer based on the Intel® Quad-Core L5408 Xeon® processor and the Intel 5100 chipset used in Xeon servers. Ideal for compute-intensive embedded, storage and communications applications and a wide range of commercial and military applications, the XV1 is designed to meet the requirements of customers who require quad-core performance for demanding applications.

The XV1 base configuration includes two GBytes of DDR II memory, three Gigabit Ethernet ports, three SATA II ports, six USB 2.0 ports, and two XMC/PMC slots. An onboard ATI ES1000 video controller is provided with either front or rear panel I/O. Operating system support includes Windows® and Linux®. The XV1 two slot configuration enables Xeon server levels of performance in a VME form-factor. An on-board XMC/PMC slot allows expansion with a wide range of PMC and XMC cards. Offered in many configurations, the XV1 computer meets the requirements of a wide variety of applications.
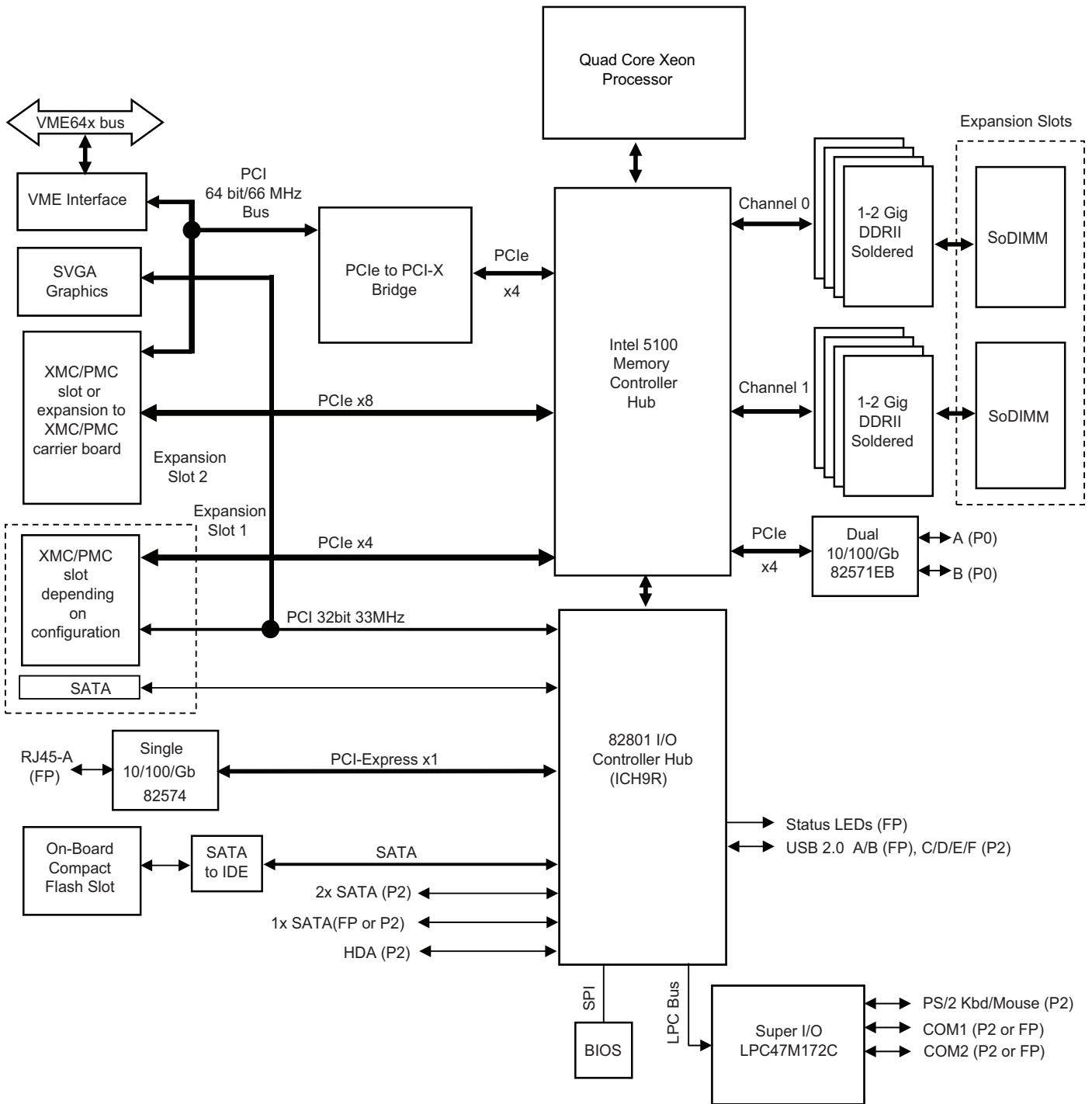
Figure 1: XV1 Block Diagram

TECHNICAL SPECIFICATIONS

General

PARAMETER	DESCRIPTION
Processor	Intel 2.13 GHz Quad Core Xeon
Memory	• Up to 4 GBytes DDRII ECC SDRAM • Up to 8 GBytes DDRII ECC SoDIMM Expansion

Front Panel (FP) and VME P2 (P2) Connector I/O

I/O	QUANTITY	ACCESS
Gb Ethernet	3	One on Front Panel, Two on P0 (Vita 41)
USB	6	2 USB on Front Panel, 4 USB on P2
Serial Ports	2	COM1: Front Panel or P2 COM2: Front Panel or P2
SATA II	3	One FP or P2, Two P2 only
Keyboard and Mouse		USB: Front Panel and P2 PS/2: P2
VGA Graphics	1	Front Panel and P2 (redundant)
High Definition Audio (HDA)	1	P2

On-Board Expansion

PARAMETER	OPTIONS
Expansion Slot 1	• XMC/PMC slot • 1.8 inch or 2.5 inch SATA hard drive • 2GbE to FP
Expansion Slot 2	• XMC/PMC slot • Connection to PMC/XMC carrier card • 2GbE to FP

Environmental Note 1

PARAMETER	OPERATING	NON-OPERATING
Temperature Range	-5 to +55°C	-40 to 95°C
Humidity (non-condensing)	0 to 95%	0 to 95%
Shock	30G @ 20mS	30G@ 20mS
Vibration (10-2000Hz)	0.90G (rms)	2.97G (rms)

Mechanical

PARAMETER	NON-OPERATING
Cooling Scheme	Air Cooled
Dimensions (HxD)	6U 6.299" (160mm) x 9.173" (233mm)

General

PARAMETER	NON-OPERATING
CompactFlash	Type I or Type II socket
Standards	Vita 41 compliant - Dual Gigabit Ethernets off P0
VME Interface	• 2eSST • Tundra Tsi148 VME64 interface • Injectors/Ejectors: VME64 and traditional VME available

Notes

1. Specifications are configuration dependent.

THEMIS SBC SOLUTIONS

Themis Single-Board Computers are designed to provide the highest levels of configuration flexibility, performance and reliability. Themis engineers use their expertise in the design of embedded systems solutions to reduce the risk, and costs, of failure caused by demanding environmental conditions that include extreme temperature or vibration. From rugged, screw-down memory modules to unique processor module/heat sink designs, Themis provides the high level of system integrity that demanding applications require. Themis BLCs provide increased resiliency to all environmental extremes - including shock, vibration, and temperatures, that cause many other embedded systems to fail.

THEMIS VALUE

Themis provides systems manufacturers and end-users with the most modern, best of breed computing resources available. Package and performance scale from small form factor embedded servers to bladed servers. We listen, understand, and work closely with our customers to optimize computing solutions that are easy to integrate, inexpensive to own and operate, and that achieve the right balance between standard commercial technology, rugged environments, and optimize space, weight, and performance.

THEMIS

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