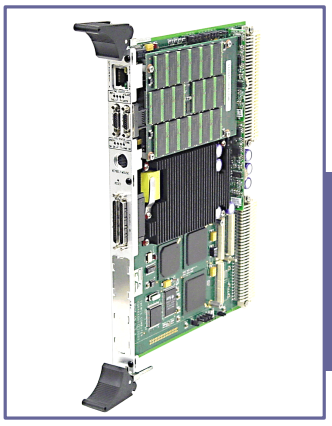


Themis USPIIe-USB Single-Board Computer

Highest Performance UltraSPARC Single-Board Computers from Themis Computer

Themis' USPIIe-USB™ is a family of high performance 6U VMEbus computer boards based on the Sun® Microsystems 550-MHz and 650-MHz 64-bit UltraSPARC® processors. The USPIIe-USB provides users with 550-MHz and 650-MHz UltraSPARC® RISC processor options. Themis offers a down-clocked variant of the 650-MHz UltraSPARC processor, to 600-MHz, for users who can accept a reduction in peak processing capacity in exchange for increases in thermal management and design margins. Themis' USPIIe-USB supports 64-bit Solaris™ 8 and Solaris 9 operating environments, enabling embedded computing users to access thousands of off-the shelf Solaris™ software solutions.

Designed for the highest level of configuration flexibility and performance, the USPIIe-USB integrates the Sun 64-bit 650-MHz UltraSPARC® IIi processors with a local PCI bus (PMC) peripheral controller slot, and a high performance bridge. This high speed VME64 board is available in one-slot, two-slot and three-slot configurations that offer a wide range of I/O and performance options.

The cost-effective USPIIe-USB/1 is a single-slot configuration that has low power dissipation, and high flexibility for embedded computing applications. It features dual 80MB/sec Ultra2 LVD SCSI ports, one 10/100Base-T Ethernet port, and four RS-232 serial ports. Memory is expandable up to 4-Gbytes using memory mezzanine cards. This baseboard configuration provides a 64-bit PMC slot for local I/O or graphics expansion. Further I/O expansion is available via a 64-bit PCI riser to the second and third VME slots.

The USPIIe-USB/2P2 two-slot configuration offers significant I/O expansion options, including two additional PMC slots. This expanded I/O configuration provides AC97 audio, a second 10/100Base-T Ethernet port, two multiprotocol serial ports and a software readable front panel rotary switch. These features make it ideal for data and telecommunications applications.

The USPIIe-USB/2P3 is a doublewide configuration providing users three additional PMC slots without the expansion features of the USPIIe-USB/2P2 configuration. All versions may be configured with Themis' high performance TGA3D graphics co-processor. The TGA3D uses one additional VMEbus slot and provides one additional PMC slot.

Features & Specifications

USPIIe-USB/1

Processors (64-bit) – 550-MHz UltraSPARC IIe or
650-MHz UltraSPARC IIi
Performance – 25/28 SPECint95/fp (650 MHz)
VME Interface – VME 64X via Tundra Universe II
A24/D16, A32/D32 modes
VME Form Factor – 6U one (1) slot, expandable to
three (3) slots with optional features
Memory – 128-MB to 4-GB SDRAM
On-chip L1 Cache – 16-KB Instr / 16KB Data
On-chip L2 Cache – 256-KB 4-way associative
(500-MHz processor)/512-KB (650-MHz)
Flash Memory – 2-MB system, 8-MB user
Error Detection/Correction – 8-bit ECC to main memory
Timers – Three level 22-bit watchdog timers
SCSI Interface – Two (2) 80-MB/sec Ultra2 LVD SCSI ports
PMC Slot – One (1) 64-bit 33-MHz PMC slot
Parallel Port – Three level 22-bit watchdog timers
Ethernet Interface – One (1) 10/100MB with front panel RJ45
Serial I/O – Four (4) serial RS232 ports (one port RS232/RS422)
64-bit Solaris 8 and Solaris 9 Support

USPIIe-USB/1

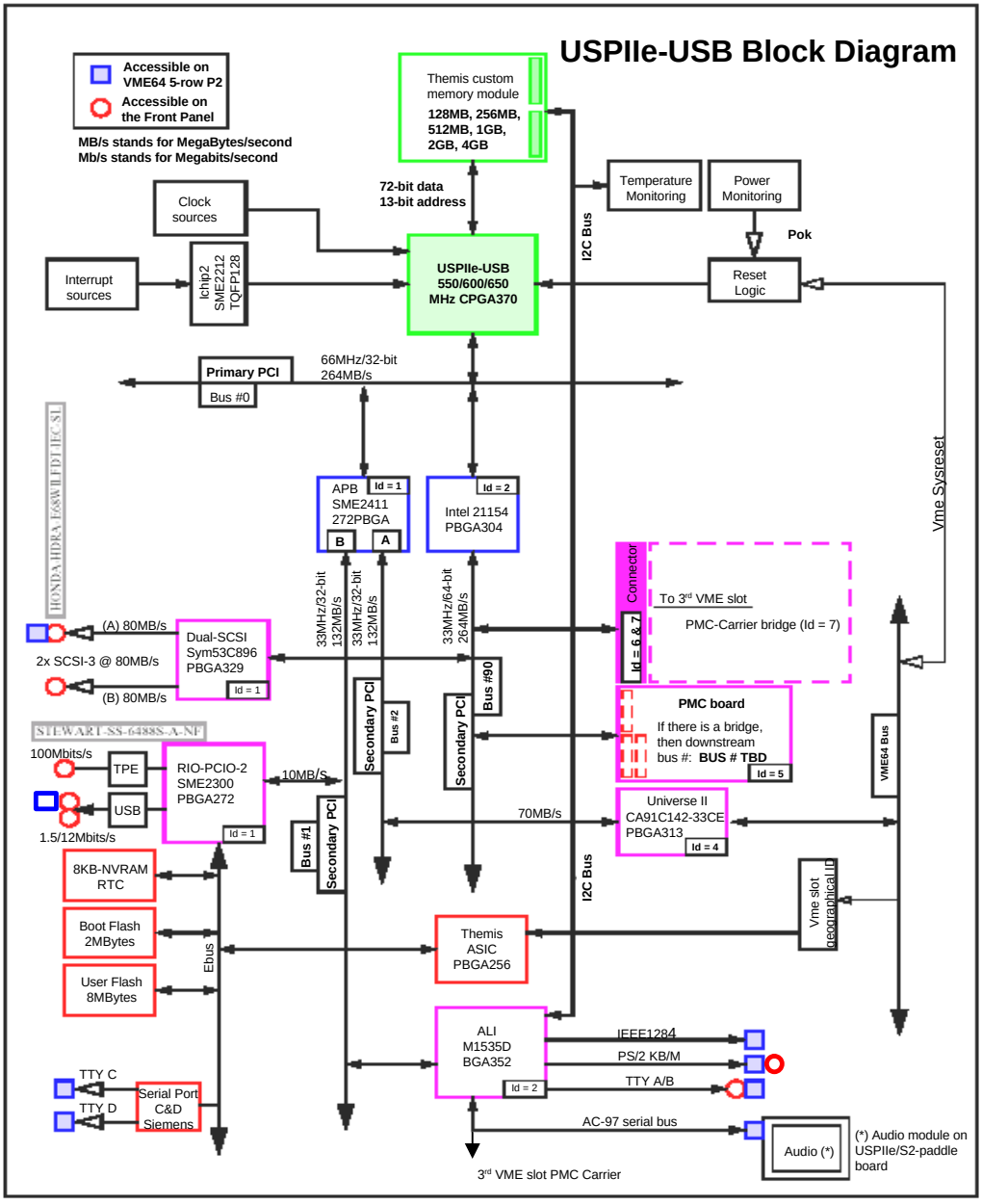
Three (3) USB 1.0 ports (2 on front panel, 1 at rear of board)
Injectors – both VME64 and traditional VME injectors available
Power Requirements-
+5V @ 6A, 12V @ 0.1A, -12V @ .04A (500MHz)
+5V @ 7A, 12V @ 0.1A, -12V @ .04A (650MHz)
Operating Temp Range: -5 to + 55°C
Cooling – 300 LFM minimum
Dimensions (HxD): 6U 9.173" (233mm) x 6.299" (160mm)
Weight: approx. 1.32 lbs. (weights vary by board configuration)

USPIIe-USB/2P2

Audio – AC97 audio In/Out, sample rate - 48 kHz, 16 bits
Ethernet Interface– One (1) additional 10/100 MB with front panel RJ45
Serial I/O – Two (2) additional serial RS232/422 ports
PMC Expansion – Two additional 64-bit PMC slots (3.3/5V)
Rotary Switch – User selectable 16-position

USPIIe-USB/2P3

PMC Expansion – Three (3) additional 64-bit 33-MHz PMC slots (3.3/5V)



Part Numbers USPIIe-USB/AAA-BBBB-CCC-DDD-EEE

AAA = Board Configuration
/1 = Baseboard with 1 PMC slot
/2P2 = Baseboard with 3 PMC slots
/2P3 = Baseboard with 4 PMC slots

CCC = Frequency
500 = 500MHz
600 = 600MHz
650 = 650MHz

BBBB = Memory
0128 = 128MB RAM
0256 = 256MB RAM
0512 = 512MB RAM
1024 = 1024MB RAM
2048 = 2048MB RAM

D = Keyboard
PS2
USB

EEE = Ejector Type No Entry = VME64 (Standard)
V32 = VME32 (Optional)

I/O Transition Module with cables INT-KIT-USPIIe-USB

Ejector Handles: Elma IEEE P1101.10 VME64 (Standard), APW "snap-lock" (Optional), Triple-E-type VME32 (Optional)

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