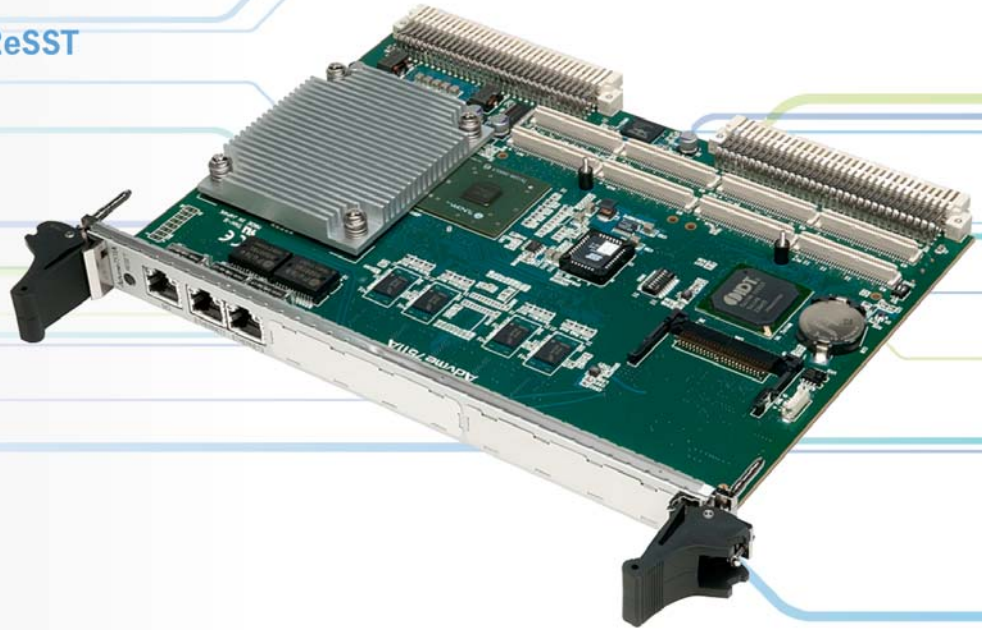# Advme7511A

- **Freescale PowerPC G4 MC7448 Processor**
- **DDR2-SDRAM with ECC support**
- **Two PMC slots**
- **Supporting VME64x, 2eSST**

FEATURES

- **Freescale PowerPC G4 Processor MC7448 (1GHz/1.4GHz, option at shipping)**

- **IDT Tsi108 or Tsi109 (The expanded temperature support version) as a host bridge**

- **Onboard DDR2-SDRAM (bandwidth;3.2GB/s, with ECC function) (512MB/1GB, option at shipping)**

- **Gigabit Ethernet (2ch)**

- **CompactFlash socket**

- **Two PMC slots (64bit,PCI(33/66MHz) /PCI-X(66/100MHz))**

- **Compatible with VITA35-2000 for PMC-P4 pin out mapping to VME64x-P2**

- **Battery-backup SRAM 512kB**

- **A CPU internal temperature monitor, a board temperature monitor and a watchdog timer for RAS function**

- **IDT Tsi148 for VME interface IC, supporting VME64x, 2eSST**

- **Size; 6U, 1 slot width**

- **Operated by single power supply (5V)**

- **For Industrial automation,and so on.**

The Advme7511A is a high performance VME bus single board computer (6U size, 1 slot width) equipped with MC7448 processor (PowerPC G4), Tsi108 or Tsi109 (host bridge) and Tsi148 (PCI-VME bridge).

CPU clock frequency (MC7448) is 1GHz or 1.4GHz and it has a built-in L1 cache (64k bytes) and L2 cache (1MB). It is equipped with DDR2-SDRAM main memory, and supports CPU performance and I/O performance with the powerful bandwidth (3.2GB/s). Memory capacity is 512MB or 1GB, and in either case, it corresponds to ECC that can correct single-bit error,and the high performance and high reliability are had both.

It is equipped with a RS232C serial port (1ch) and Gigabit Ethernet (2ch) as front panel I/O, as well as a CompactFlash socket and two PMC(PCI/PCI-X)slots onboard.

The board's VME interface supports VME64x and 2eSST, and can be used as either the system controller or nonsystem controller of the VME bus. The slot type is automatically recognized, and then accordingly, the operation mode of the bridge IC is automatically changed. It can be used as a single central CPU, but furthermore, CPU boards can be added depending on the processing load. The Advme7511A has an expanded temperature range of -20ºC to 75°C as factory optional settings (Tsi109).

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System Architecture

Processor	Freescale MC7448 1GHz or 1.4GHz (Optional at shipment) L1 cache : data 32KB, instruction 32KB L2 cache : data / instruction 1MB
Host Bridge	IDT Tsi108 or Tsi109 (The expanded temperature support version)
Main Memory	SDRAM supporting DDR2-400 is equipped on board. Capacity of 512MB or 1GB (Optional at shipment) With ECC function capable of automatic correction of 1 bit error within 64 bits.
Boot ROM	512KB Flash memory
Serial EEPROM	2k bit I2C-EEPROM Non-volatile memory to store boot information
Backup SRAM	512KB SRAM Coin type lithium primary battery for data backup
Front I/O	Ethernet 2ports Serial port : TIA/EIA-232E specification, asynchronous, 1 port 8 pin modular connector
On board I/O, and Peripheral	PMC I/F : IEEE 1386.1 compliant 2 slots CompactFlash : CF+ and CompactFlash Specification Rev2.1 compliant
External bus Interface	Standard: VME64x(ANSI/VITA 1.1)and 2eSST(ANSI/VITA 1.5) compliant Address/Data width: A16,A24,A32,A64,D08,D16,D32,D64
PCI-VME Bridge chip	IDT Tsi148
Power	DC5V±5% (supplied from P1/P2 connector)
Mechanical	Form factor: 6U size, 4HP (1 slot width) Weight: 380g
Environmental	RoHS compliant

Block Diagram
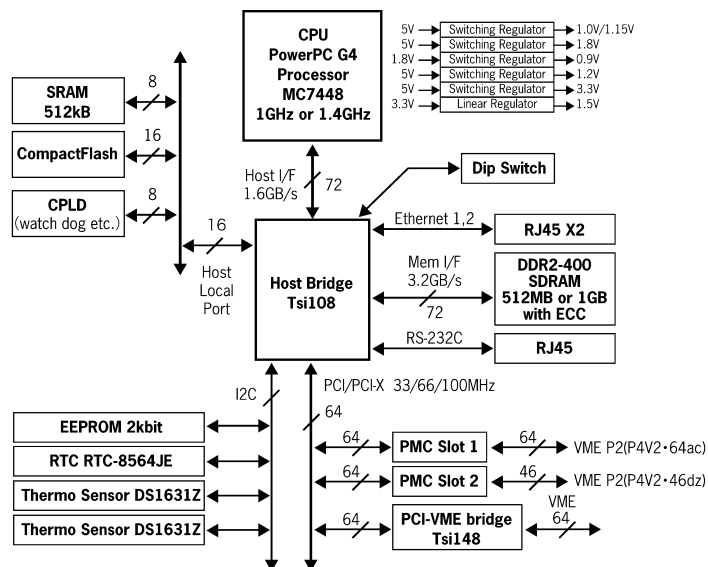
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