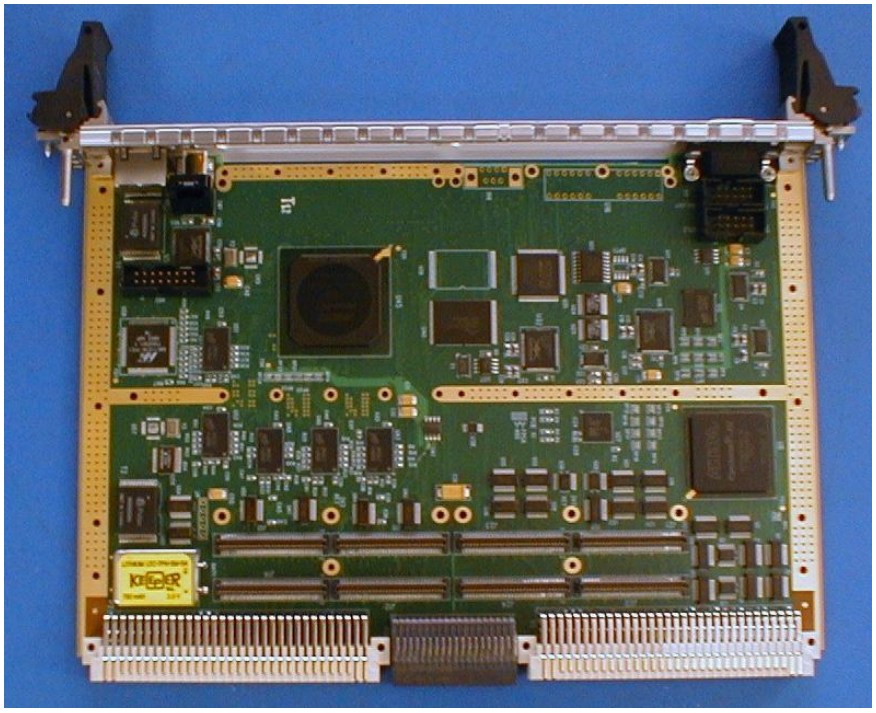
CPU-PPC460EX-VME

PPC Based CPU / Communication Board

The CPU-PPC460EX-VME processor board is designed for rugged, conduction and convection cooled environments. It is capable of running Linux and VxWorks operating systems. Because of its high performance processor and the fact it contains a large number of diverse interfaces types, it is very well suited for communication intensive applications. In addition, the board was designed for low power consumption enabling very high reliability in the harshest environments.



Features

- AMCC PPC460EX processor @ 1 GHz
- 256 Mbytes of DDR2 SDRAM with ECC
- 2 10/100/1000 BaseT Ethernet port
- 10 serial ports - configurable transceivers
- 2 USB ports – 1 Host, 1 OTG
- 2 PCI Mezzanine Card Sites (64/66)
- VMEbus interface – 5 row or 3 row
- 1 SATA port
- 128 Mbytes of NOR Flash
- 32 Mbytes of NAND Flash
- PCIe (X4) Expansion on P0
- Temperature sensor
- Real time clock
- Watchdog Timer
- SPI Interface
- IIC interface
- -40 to +85°C operation

Benefits

With 2,000 DMIPS of integer performance, an integrated floating point unit and less than 5 watts of typical processor power consumption, this board remains cool in embedded environments while still providing many options for communication connections. Since many of the custom interfaces were designed into an FPGA, the board effectively combats long term obsolescence problems as well.

Beyond Electronics Corporation

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CPU-PPC460EX-VME

AMCC Power PC Processor

- 32 KB I-cache and D-cache
- 256 MB L2 cache with parity
- Floating point unit
- 1 four channel and 1 single channel DMA controller

SDRAM

- 128 Mbytes (standard)
- DDR2 400 with ECC

Ethernet Interface

- 2 channels - 1 front and 1 rear panel
- 10/100/1000 Mbps capable

Host Serial Interfaces

- Two processor RS-232 Interfaces
- Five wire connection: RTS, CTS, TXD, RXD, GND
- Can be reconfigured for one 8 wire interface or 4 two wire interfaces

Additional Serial Interfaces

- Eight RS-232/422/485 Interfaces
- 16550 compatible
- Two channels full handshake, 2 channels reduced handshake
- Other channel count/configurations software configurable

VMEbus interface – 5 row

- VME64X compatible
- Master/Slave
- A32/A24/A16
- D64/D32/D16/D8/MBLT64
- Auto-system controller
- Full interrupter, interrupt handler

Data Storage

- 1 SATA type 1 interface
- 128 Mbytes of NOR Flash
- 32 Mbytes of NAND Flash
- 2 EEPROMs

PMC Sites

- 2 Sites: 33/66 MHz, 32/64 bit
- 3.3 volt only

Other Interfaces

- 1 IIC (I2C) interface to rear panel connector
- 1 SPI to on-board header
- 1 PCIe X4 connection to the P0 connection
- 2 USB Interfaces

Backward Compatibility

- No 3.3 Volts required on VMEbus
- Can be supplied with 3 row or 5 row DIN VMEbus connectors

Mechanical and Environmental Data

- 6U VMEbus form-factor
- Single slot implementation
- Operating Temperature: -40 to +85C
- Storage Temperature: -55 to +100C
- Shock: 40G ½ sine, 20 mS
- Random Vibration: $0.1g^2$/Hz 5-1000Hz
- Sine Vibration: 5g 32-2000Hz
- Humidity: Commercial 95% non-condensing
- Reliability data: 217-F, GB, 25C estimated to exceed 350,000 hours

Ordering Information

CPU-PPC460EX-VME -A - Air Cooled
CPU-PPC460EX-VME -C - Conduction Cooled

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