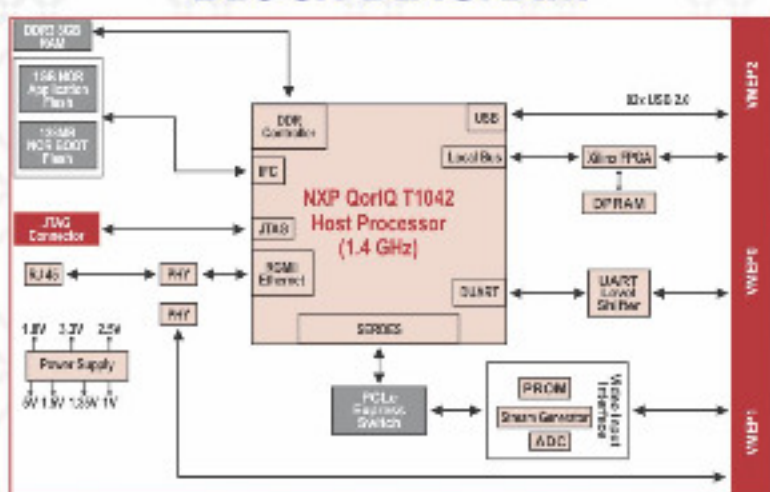


QUAD CORE - SINGLE BOARD COMPUTER



BLOCK DIAGRAM



NXP QorIQ T1042-based Rugged 6U VME Single Board Computer

Specifications

Integrated Host Processor

- T1042 up to 1.4 GHz
- Four e5500 cores (single threaded)
- Double-precision floating-point support -- 256 kB per core L2 cache
- 256 MB platform cache

DDR3 SDRAM

- Up to 8 GB DDR3L SDRAM with ECC Double Bank

Flash Memory

- 128MB NOR Boot Flash memory
- 256MB NOR Application Flash memory

Backplane

- Full VME64 Host/slave capable with 2eSST support

Mezzanine Slots

- Two XMC slots
- Up to four lane PCI-e (Gen2.0)

Gigabit Ethernet

- 2x 10/100/1000BASE-T Ethernet
- 1x routed to front panel; 1x routed to backplane

Rear I/O

- 4x RS-232 UART ports; 2x routed on backplane and 2x on front panel
- 2x USB 2.0
- 2x SerialATA (3 Gb/s)
- 1x Single lane mini PCI-e (Gen 2.0)
- 1x XGA RGB Video Output on backplane
- Up to 8, 2.5V-tolerant GPIO on front panel and 10; 3.3V tolerant GPIOs; connected to FPGA through backplane
- 3x SPI : 1x on each XMC connector and 1x on front panel
- 1x I2C on front panel

NVRAM / Real-Time Clock / Watchdog / EEPROM

- 512 kB non-volatile nvSRAM
- 512 Kb Serial EEPROM

Real-time clock and Watchdog timer

Temperature Sensors

- On-board ambient temperature and processor core temperature sensors

Power

Requirements

- Operates from +5V and +15V supply
- +12V only if required by mezzanine module

Features

- 6U VME single board computer
- NXP Power Architecture TM
- T1042 (four e5500 cores)
- Onboard Xilinx 6 Series high-end FPGA for ASICs design
- Xilinx CPLD for power sequencing and reset management
- High-speed 3.3V 16K x 16 dual-port SRAM
- DDR3L with ECC (up to 8 GB)
- 128MB + 256MB NOR Flash
- 512 Kb non-volatile nvSRAM
- 512 Kb Serial EEPROM
- Support 2x independent XMC sites
- 2x 10/100/1000BASE-T Ethernet
- 4x RS232 ports
- 2x serialATA (3 Gb/s) 1x mini
- PCI-e (Gen 2.0)

Optional Accessories

- 6U Standard backplane
- Temperature management
- Wedge Locks

Standards

- MIL-STD-454G
- ANSI/VITA/1994 VME64
- MIL-STD-801D
- MIL-STD-461B

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