Pm8540

PMC Module

Processor PMC module with Freescale 8540 PowerQUICC III integrated processor

- VITA32 Processor PMC
- Freescale 8540 PowerQUICC III integrated processor
- 256 or 512MB DDR DRAM
- 32MB flash
- 16MB persistent memory
- Dual 10/100/1000 Ethernet ports with P14 access
- Single 10/100 Ethernet port with front bezel access
- Serial debug port
- Carrier Grade Linux
- Quality assured by over 30 years of design experience and a TL 9000 and ISO 9001:2000 certified quality management system. (FM 26789)

For customers in the wireless and convergence market, that need a cost effective and high performance control subsystem, the Pm8540 from Emerson Network Power provides a highly integrated processor and I/O to meet their system and blade control requirements.

Furthermore, the Pm8540 Processor PCI Mezzanine Card (Processor PMC) is designed for hardened telecom applications with Carrier Grade Linux support and long service life of 15 years.

Using an off-the-shelf processor subsystem saves you time-to-market by allowing you to focus your engineering efforts on the key value-add portions of the system without spending time and effort on the processor design and testing. A modular processor subsystem also lowers your lifetime cost of ownership by providing an easy upgrade path, and protecting you from obsolescence issues.

Considerable engineering effort has gone into ensuring maximum flexibility on the Pm8540. The module can be used in both Processor PMC monarch and non-monarch modes, acting as the host for the local PCI bus or as a peripheral on the local PCI bus, depending on the application or baseboard.

RoHS 6/6 COMPLIANT

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Block Diagram
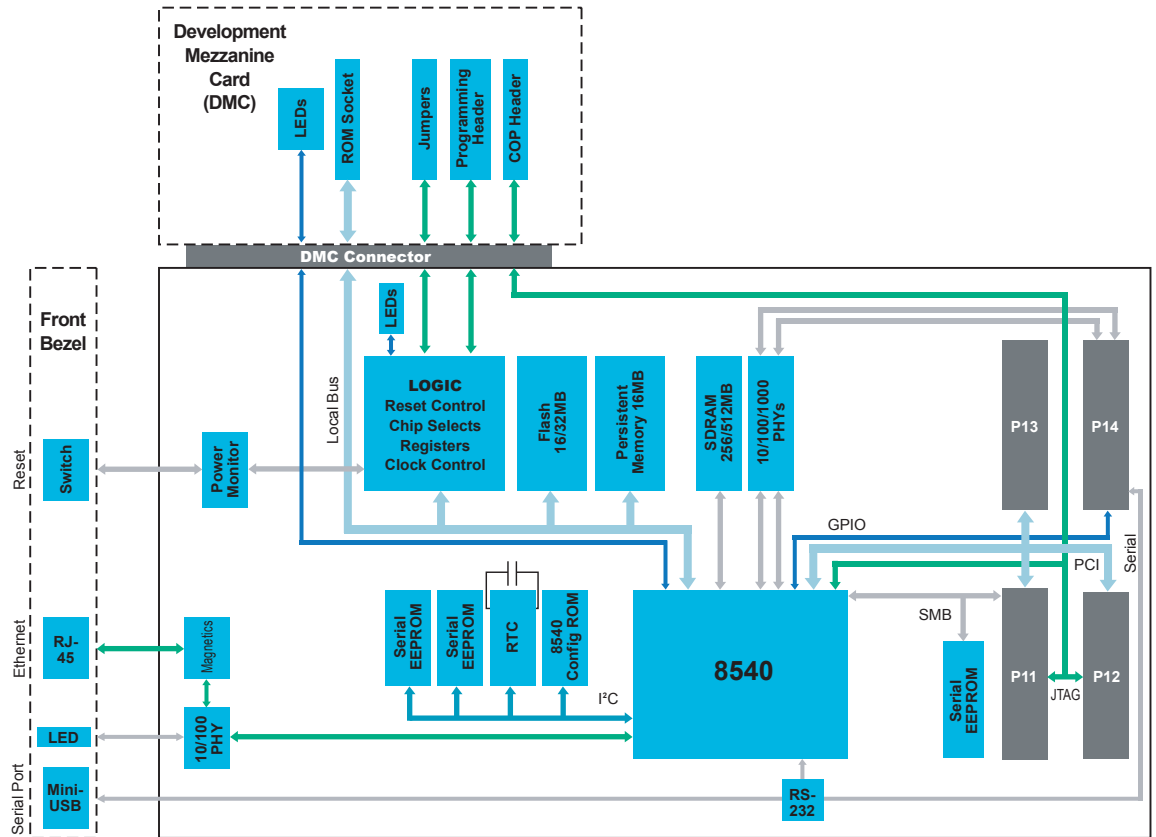
Specifications

PROCESSOR

Freescale PowerQUICC III 8540

- Up to 1 GHz operation
- System-on-chip functions
  - PCI/PCI-X bus interface
  - Ethernet controller
  - UART controller
  - DDR SDRAM controller
  - DMA
  - I^2C controller

MEMORY

- 256 or 512MB DDR SDRAM
- 16MB persistent memory
- 32MB flash memory
- Flash Architecture NOR

DEVELOPMENT MEZZANINE CARD (DMC)

- Optional plug-on card (side 2) to speed development
- EIA-232 debug serial port with cable to DB-9 connector
- JTAG header for PLD programming
- JTAG/COP header for software development
- Four software configuration jumpers
- 32-pin PLCC 8-bit socket for software development
- Single connector to attache to PMC module

I/O

Ethernet

- Dual 10/100/1000 Ethernet with P14 connector access
- Single 10/100 BaseT Ethernet with front bezel access

DMA

- 4-channel DMA support
- High-speed data movement between any module resources without significant CPU intervention

PCI

- 33/66 MHz operation
- Monarch and non-monarch mode support (local host or peripheral)
- PCI 2.2

Other

- EIA-232 serial console port accessible via front panel or P14 connector
- General purpose I/O (GPIO) accessible via the P14 connector
- JTAG/COP available during development via optional DMC
- Recessed front panel reset switch

SOFTWARE SUPPORT

- Carrier Grade Linux
- Wind River VxWorks

MONITOR

- Flash-based monitor and power-up self-test software
- Command-line editing
- Board and device initialization and access
- Debug support

PHYSICAL CHARACTERISTICS

- PMC form factor: 149.0 mm (5.87") x 74.0 mm (2.91")
- Baseboard and module fit in a single CompactPCI®/CompactPCI PSB or ATCA® slot
- Power requirements: 3.3 VDC or 5 VDC @ 11.5W typical
- Operating range: 0° to 55° C, 5-95% relative humidity (non-condensing)

SPEC COMPLIANCE

- IEEE 1386.1 CMC/PMC
- VITA 32 Processor PMC

REGULATORY COMPLIANCE

- FCC Part 15 (US)
- ICES-003 (Canada)
- IEC/UL/CSA 60950
- EN55022

SOLUTION SERVICES

Emerson Network Power provides a portfolio of solution services optimized to meet your needs throughout the product lifecycle. Design services help speed time-to-market. Deployment services include global 24x7 technical support. Renewal services enable product longevity and technology refresh.

■ AC Power Systems
■ Connectivity
■ DC Power Systems
■ **Embedded Computing**

■ Embedded Power
■ Integrated Cabinet Solutions
■ Outside Plant
■ Power Switching & Control

■ Precision Cooling
■ Services
■ Site Monitoring
■ Surge & Signal Protection

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