

Pm8540

PMC Module

Embedded Computing for
Business-Critical Continuity™

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.

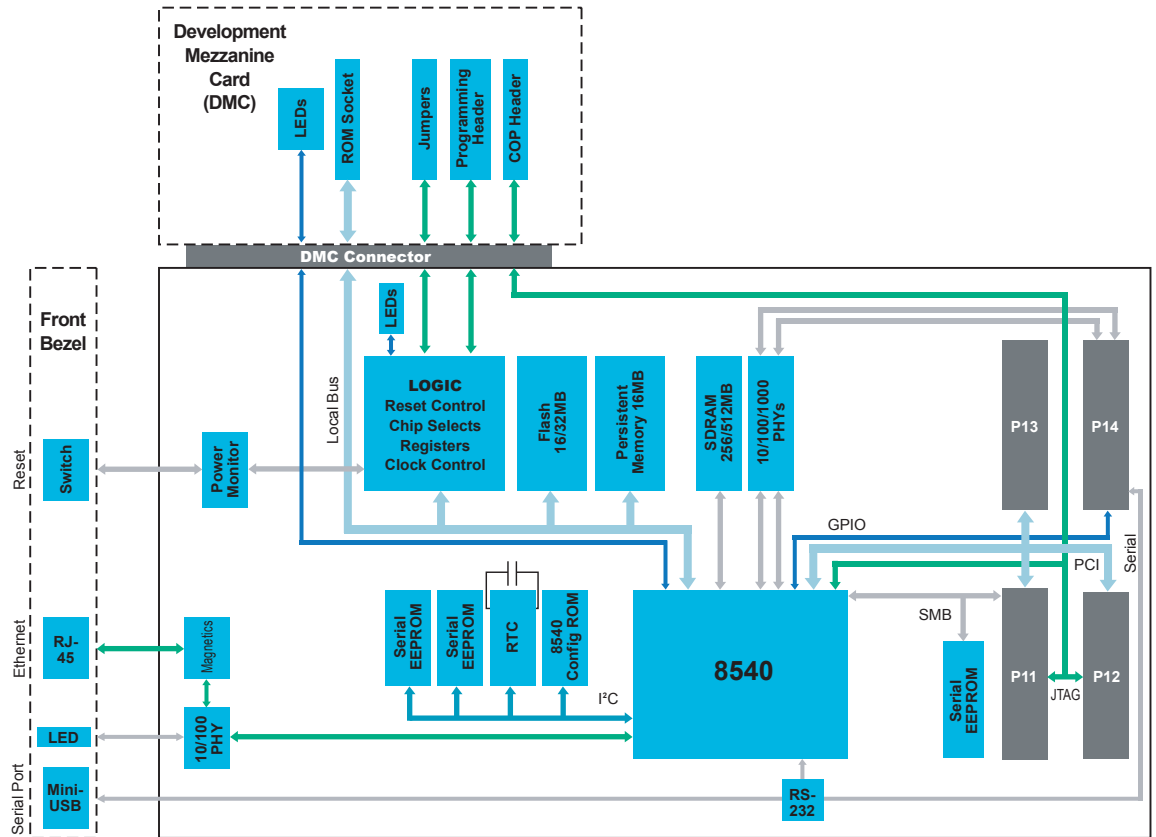
Furthermore, the Pm8540 Processor PCI Mezzanine Card (Processor PMC) is designed for hardened telecom applications with Carrier Grade Linux support and long service life of 15 years.

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.



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
 - ▲ I²C 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 attach 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.

ATCA and CompactPCI are registered trademarks of the PCI Industrial Computer Manufacturers Group. All other trademarks are the property of their respective owners.

This document identifies products, their specifications, and their characteristics, which may be suitable for certain applications. It does not constitute an offer to sell or a commitment of present or future availability, and should not be relied upon to state the terms and conditions, including warranties and disclaimers thereof, on which Emerson Network Power may sell products. A prospective buyer should exercise its own independent judgment to confirm the suitability of the products for particular applications. Emerson Network Power reserves the right to make changes, without notice, to any products or information herein which will, in its sole discretion, improve reliability, function, or design. Emerson Network Power does not assume any liability arising out of the application or use of any product or circuit described herein; neither does it convey any license under its patent or other intellectual property rights or under others. This disclaimer extends to any prospective buyer, and it includes Emerson Network Power's licensee, licensee's transferees, and licensee's customers and users. Availability of some of the products and services described herein may be restricted in some locations.

Emerson Network Power.
The global leader in enabling
Business-Critical Continuity™.

- 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

Emerson Network Power

Offices: Tempe, AZ U.S.A. 1 800 759 1107 or +1 602 438 5720 • Madison, WI U.S.A. 1 800 356 9602 or +1 608 831 5500
Shanghai, China +86 10 85631 122 • Paris, France +33 1 60 92 31 20 • Tokyo, Japan +81 3 5403 2730
Munich, Germany +49 89 9608 2333 • Hong Kong, China +852 2176 3540 • Tel Aviv, Israel +972 3 568 4387

www.EmersonNetworkPower.com/EmbeddedComputing

Emerson, Business-Critical Continuity, Emerson Network Power and the Emerson Network Power logo are trademarks and service marks of Emerson Electric Co.
©2008 Emerson Electric Co.