

Pm8560

PMC Modules

Embedded Computing for
Business-Critical Continuity™

ProcessorPMC module with up to 8 E1/T1/J1 interfaces

- Processor PMC (VITA32-2003) with up to 8 software selectable E1/T1/J1 interfaces
- Freescale Semiconductor MPC8560 PowerQUICC III communication processor
- Up to 512MB Double Data Rate SDRAM with ECC
- Up to 32MB Flash
- PCI bus operation of 32-bit/66 MHz
- 10/100/1000 Ethernet port
- Optional CTbus clock support
- Optional rear transition module for ATCA or 2.16/cPSB blades supporting E1/T1/J1 interfaces
- RoHS/WEEE compliant configuration available
- Quality assured by over 30 years of design experience and a TL-9000 and ISO 9001:2000 certified quality management system. (FM 26789)

The Pm8560 is a Processor PCI Mezzanine Card (ProcessorPMC) module with up to 8 E1/T1/J1 interfaces.

The Pm8560 is ideal for 3G (UTMS & W-CDMA) and 2.5G (GPRS) data and signaling applications. The module is capable of supporting a wide variety of protocols including SS7 and SIGTRAN. Other applications include signaling gateways and softswitches as a signaling interface card.

The Pm8560 includes a reduced media-independent interface (RMII) on Pn3 for Ethernet PHYs and management interface.

Physical connectivity of E1/T1/J1 spans the Pm8560 via rear transition modules (RTMs) that interface from either 2.16/cPSB blades or AdvancedTCA blades such as Emerson's Katana product line.



COMMUNICATION INTERFACES

T1/E1/J1

- Up to 8 channelized E1 or T1/J1 spans
- Supports T1/CEPT and other user-defined protocols (customer provided software may be required)
- Automatically performs efficient packing
- Rear (PMC P14) E1/T1/J1 I/O
- Optional cPCI/2.16/cPSB or ATCA transition module available for rear I/O applications supporting 16 ports per system blade
- Surge protection for E1/T1/J1 ports on passive transition module

Ethernet

- RMII through P13 connector
- 10/100/1000 BaseT Ethernet with front panel access

PTMC

- Subset of PTMC Configuration 2
- Serial Tx/Rx
- RMII
- RMII PHY Management I/F
- CT bus clocks

Other

- EIA-232 serial console port accessible via front panel or P14 connector

MEMORY

- Up to 512 Mbytes Double Data Rate SDRAM
- Up to 32 Mbytes Flash memory
- Flash Architecture NOR

COMMUNICATIONS PROCESSOR

Freescal PowerQUICC III MPC8560

- 800 MHz PowerPC™ Book E core operation
- 266MHz when core is 800MHz RISC-based Communications Processor Module (CPM)
- Communications functions
 - PCI bus interface
 - Ethernet controller
 - UART controller using SCC
 - TDM ports for eight T1/E1/J1 spans using MCC
 - ATM support via Inverse Multiplexing for ATM (IMA)
- System functions
 - DDR SDRAM controller
 - General purpose I/O (GPIO)
 - DMA
 - I²C controller

DEVELOPMENT MEZZANINE CARD

- 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-readable configuration jumpers
- 32-pin PLCC 8-bit socket for software development
- 2 user-programmable LEDs
- Single connector attached to PTMC module

OPTIONAL REAR TRANSITION MODULE (RTM)

- cPCI/cPSB (PICMG 2.16) formfactor
 - Supports up to 2 Pm8560 modules on a cPCI/cPSB baseboard (such as the Emerson Katana750 or Katana752i)
 - 8 RJ-45 connectors supporting 8 E1/T1/J1 ports from a single Pm8560 or 8 RJ-45 connectors supporting 16 E1/T1/J1 ports from 2 Pm8560 modules (requires breakout cables)
 - 100 ohms T1/J1 balanced interface
 - 120 ohms E1 balanced interface
 - T1/E1/J1 transformers with isolation and surge protection for every signal
 - RJ-45 connectors supporting console / debug ports from each Pm8560 module
- ATCA formfactor
 - Supports up to 4 Pm8560 modules on an ATCA baseboard (Such as the Emerson KatanaQp)
 - Support for up to 32 E1/T1/J1 ports with 4 Pm8560s. TTIP, TRING, RTIP and RRING are routed from Zone 3 connector through transformers and surge protection out the rear I/O faceplate
 - 100 ohms T1/J1 balanced interface
 - 120 ohms E1 balanced interface
 - T1/E1/J1 transformers with isolation and surge protection for every signal
 - Micro-D connectors support serial I/O from Pm8560(s)
 - Operating range: 0° to 55° C, 5-95% relative humidity (non-condensing)

REGULATORY COMPLIANCE

- FCC Part 15 (US)
- ICES-003 (Canada)
- IEC/UL/CSA 60950
- NEBs: Telcordia
- EN55022
- EN55024
- EN300386

OPERATING SYSTEM SUPPORT

- Linux Support Package (LSP) for Monta Vista Carrier Grade Edition (CGE) 3.1

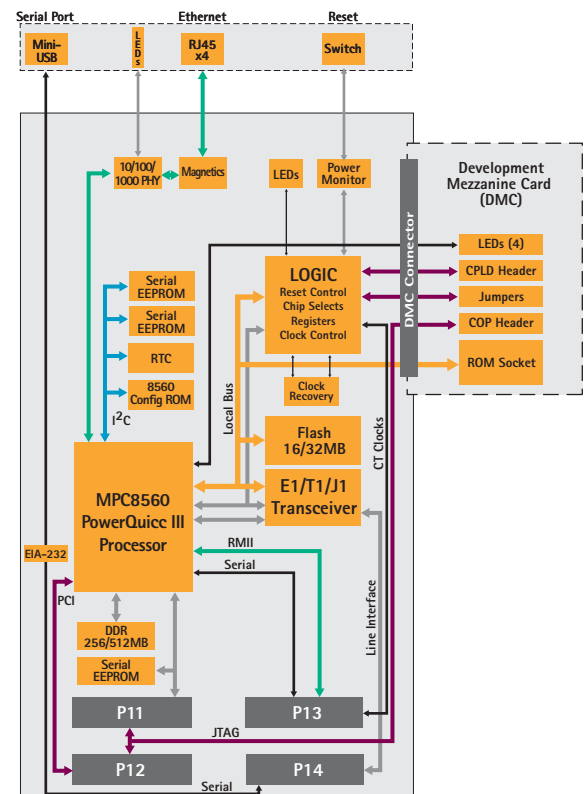
PROTOCOL SUPPORT

- Optional SpiderS7 layers MTP1, MTP2 and MTP3, and

SpiderSIGTRAN M2UA, M3UA and SCTP (professional services may be required for porting/configuration)

PHYSICAL CHARACTERISTICS

- Board format
 - Length: 149.0 mm (5.87")
 - Width: 74.0 mm (2.91")
- Baseboard and module fit in a single cPCI/cPSB or ATCA slot
- Power requirements: +3 & +5 VDC @ 11.5W typical
- Operating range: 0° to 55° C, 5-95% relative humidity (non-condensing)
- Specifications
 - IEEE 1386.1 CMC/PMC
 - VITA 32 ProcessorPMC



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