

The Rapid-Technology PMC-Stratix board is a high performance computing subsystem and I/O expansion module for embedded applications in PMC form factor. Based on the latest FPGA technology, the board functionality is completely user defined. Sample applications include telecom data processing, compute intensive DSP co-processing, machine control and I/O interfacing for processor host boards. This PCI 2.2 compliant module supports 64-bit/66MHz down to 32-bit/33MHz Master/Target PCI interfacing. The board comes with the active and physical layer components for System-On-a-Programmable-Chip (SOPC) design. Full support for the Altera Nios embedded processor is provided with SOPC Builder compliant components.

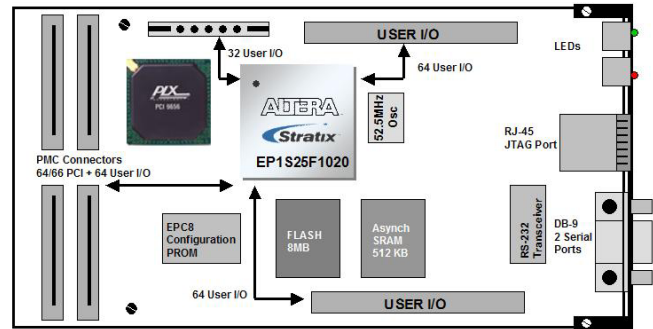


Fig 1. Functional Block Diagram

## Features

- **PCI 2.2 32/64-bit 33/66MHz Master/Target**
  - Industry Standard PLX-9656 Accelerator
  - 2 DMA Channels
  - Software Development Tools including API, Object Code Library, Sample Applications, MS and Linux Drivers are available from PLX, [www.plxtech.com](http://www.plxtech.com)
- **System-On-a-Programmable-Chip (SOPC) Support**
  - Altera Nios 16/32 bit Embedded Processor Support
  - Altera SOPC Builder supported Memories:
    - 8 MB FLASH for code storage
    - 512 KB Asynch SRAM
  - Two RS-232 Serial Ports accessible through Front Panel DB-9 connector. Additional serial ports available with SOPC builder and user I/O pins.
- **224 User Configurable I/O Pins**
  - 64 I/O pins on PMC I/O Connector
  - 128 I/O pins on 2 Headers
    - Accessible from backside of board for easy access
    - 5V logic levels supported
  - 32 I/O pins on Mictor Connector
    - Direct connection to industry standard test equipment.
    - Accessible from backside of board for easy access

## Processing

- **High Performance Altera Stratix FPGA**
  - EP1S25F1020C5 device is standard
    - 25,660 Logic Elements
    - 1.9 Mbits On-Chip Memory
    - 10 DSP Blocks, 80 Dedicated Multipliers
    - 6 PLLs
  - Board supports all Altera Stratix devices in the 1020 pin Fineline BGA (EP1S25/30/40/60). Contact Rapid-Technology for custom board or front panel requirements
- **Logic Configuration**
  - FPGA configured from EPC8 Configuration PROM on power up
  - EPC8 PROM programming and dynamic FPGA configuration via the Front Panel RJ-45 JTAG connector.
  - Rapid-Technology MVDC Download Cable Included.
- **Power**
  - PMC connector provides main power and is regulated on board for device operating voltages.
  - The board can operate independently by applying power to the PCB power pads. This allows development in the absence of a host board.

## Ordering Info

Ordering Code: PMC-STRATIX1S25  
 Single Unit Price: Estimated \$1995  
 Availability: March 2003

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