

DM11

C6x PMC card with Direct FPDP Interface



The DM11 PMC is a high speed DSP node based on the Texas Instruments TMS320C6x DSP providing 1600mips peak (at 200MHz) with an FPGA based, customisable FPDP (Front Panel Data Port). The PMC can be fitted with either the C6201B, fixed-point processor, or C6701, floating-point processor. The C6201B is available at 233MHz or 200MHz, the C6701 at 167MHz. These DSP's can execute 8 instructions per clock cycle giving up to 1864 MIPS peak.

The processor's external memory interface provides direct connection to the local memory when fitted. Provided, on module, there are 16Mbytes of SDRAM. 512kbytes of 8 bit FLASH is provided which can be used to boot C6x.

An FPDP compatible IO connector is fitted with FPDP compatible buffers. A FIFO based master or slave interface is implemented in a Xilinx Virtex FPGA. The device can be programmed by the C6 allowing the user to implement data filtering in hardware to his own requirement.

The user I/O connector of the PMC is used to provide access to the C6x's serial ports. This feature can be disabled where it would interfere with other motherboard functions. These are made available through the I/O connector and provide glueless connection to a multitude of I/O chips for functions such as audio codecs, A/D, D/A etc.

TMS320C6201B or C6701

16Mbytes SDRAM

1Mbytes SRAM

512K Bytes FLASH

JTAG Debug

Direct FPDP Interface

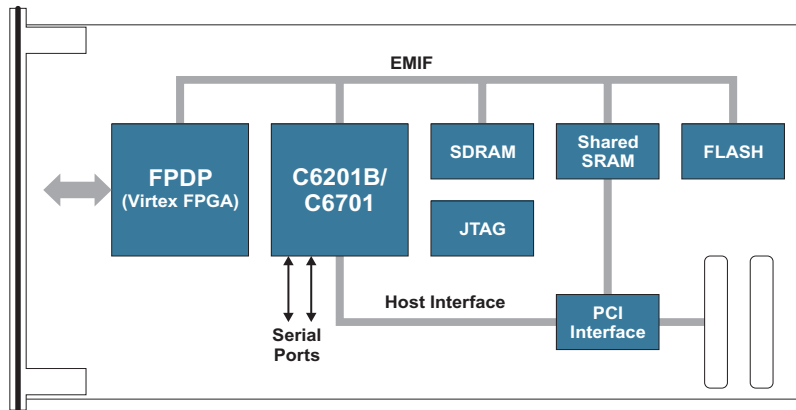
32-bit PCI Interface

PMC site

Dual I/O expansion sites

PMC Format

Block Diagram



Technical Specification

Overview

DSP Processor	TMS320C6201B or TMS320C6701
Clock Speed	233MHz (C6201B) 167MHz (C6701)

Serial Ports (McBSP)

Total per Processor	2 Multi-channel, multi-protocol, buffered serial ports.
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Memory

SRAM (DSP on-chip)	1Mbit: 16Kbyte 32-bit cache/program 64Kbyte data
SDRAM	16Mbytes
FLASH	512kbytes
SRAM	1Mbyte (shared with PCI)

PCI Interface

Type	32-bit, 33MHz (master/slave)
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Peripherals

FPDP	Implemented with Xilinx Virtex FPGA to allow for user customization
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JTAG Debug

Interface	XDS510 compatible, via PCI slave
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Format

PMC	74 x 149mm
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Power

5V	TBA
3.3V	TBA

Software

Development tools	Texas Instruments C compiler + assembler tools. Code Composer™ debugging via JTAG interface.
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Contact Details

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