



Features

- TMS320C44 processor provides 50 MFLOPS power
- 120 MB/sec data transfer rate over PCI bus
- Four 20 Mbyte/sec front panel comm ports
- 512 kB zero wait-state SRAM for global and local bus
- 512 kB flash EEPROM
- Dual FIFO PCI interface using PLX 9080
- SwiftNet driver for C44 code development
- Example software for host CPU boards

Ordering Information

Model	Description
7110	Single TMS320C44 PMC module, 50 MHz clock
Options:	
-001	1 MB local SRAM
-002	0.5 MB global SRAM

General Information

Model 7110 is a single C44 processor PMC (PCI Mezzanine Card) module for digital signal processing. It can be attached to any VMEbus baseboard (made by Pentek or others) equipped with a PMC interface, to function as a coprocessor to the processor on the baseboard.

It can also be used as a high-speed gateway to other C40 or C44 VME boards through its front panel comm ports.

A JTAG interface to support the Model 8535 XDS emulators is also included.

Processor and Memory

The PMC module employs a Texas Instruments TMS320C44 DSP processor operating at 50 MHz. Both local and global buses of the C44 may be optionally equipped with additional zero wait-state SRAM, to support full utilization of its dual bus architecture and deliver 50 MFLOPS processing power.

A nonvolatile 512 kB flash EEPROM is provided on the local bus and contains factory-supplied boot code. Nearly all of this memory is available for user code to support complete self-loading embedded applications.

PCI Interface

The connection between the C44 and the PCI bus is facilitated by the PLX 9080 PCI controller and two large FIFO memories. The PCI chip includes two DMA channels, supports master and slave transfers, and contains four bidirectional FIFO buffers for zero-wait-state burst operation.

Two additional 16k x 32 FIFOs are included between the PCI controller and the C44 global bus. One FIFO acts as a C44 input buffer, while the other acts as an output buffer. These FIFOs provide for extremely efficient implementation of the block transfers supported by the C44 and the PCI controller and achieve the full 120 MB/sec PCI data transfer rate. For control or message passing, a FIFO bypass path is provided.

Comm Port Interface

Four 20 Mbyte/sec front panel comm ports are fully compatible with Pentek's line of C40 DSP processor boards and a rich complement of comm port peripherals, including A/D and D/A converters, telecom interfaces, SCSI controllers, TAXI adapters and other I/O functions.

Specifications

- Processor:** TMS320C44, 50 MHz clock
- Global SRAM:** 0 kB std; 128k x 32 (512 kB) option -002; zero wait state; access through global bus
- Local SRAM:** 128k x 32 (512 kB) std; 256k x 32 (1 MB) option -001; zero wait state for data and programs; access through local bus
- Flash EEPROM:** 512 kB; access through local bus
- Comm ports:** four front panel bidirectional ports, 20 MB/sec
- FIFO memory:** 16 ksample input and output plus FIFO bypass
- PCI interface:** 32-bit PLX 9080 controller, 120 MB/sec burst transfer rate
- Power:** 1.0 A at +5 V
- Size:** standard PMC module, 2.91 in. x 5.87 in.

Block Diagram, Model 7110

