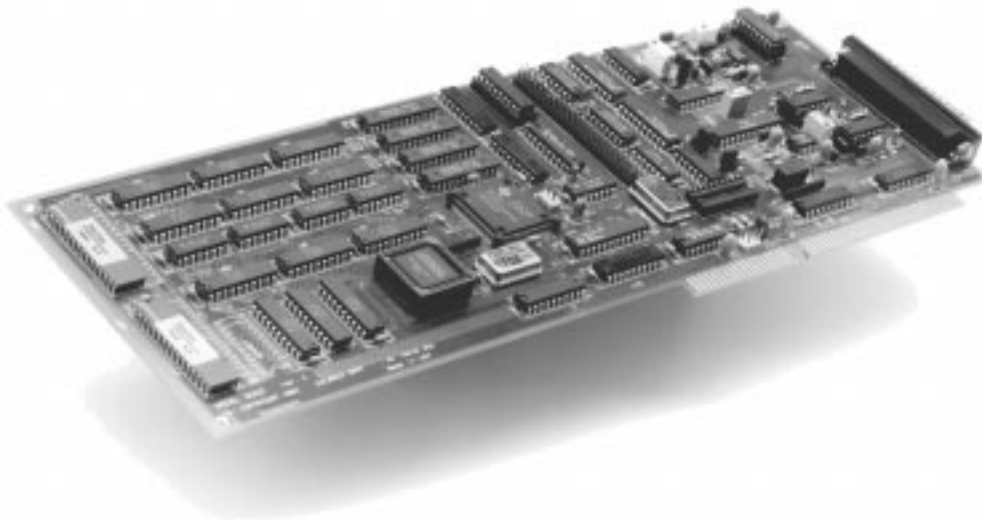# DALANCO SPRY

MODEL 5000 DSP

APPLICATIONS

- Signal Processing
- Data Acquisition
- Instrumentation
- Control
- Telecommunications
- Image Processing
- Numeric Processing
- Digital Audio

OVERVIEW

The Model 5000 combines high performance signal processing and powerful data acquisition capabilities on a single board.

The Model 5000 is based upon the Texas Instruments TMS320C5x series DSPs, and delivers up to 40 MIPS performance. Data acquisition is provided for 8 channels and a maximum sampling rate of 500 Khz. Two analog output channels are provided, as are a buffered digital I/O expansion connector and the serial interfaces of the TI DSP.

The board is populated with 64K words of Program RAM and 128K words of dual ported Data RAM.

The Model 5000 features high data transfer rates between itself and the host PC's memory, and multiple boards may be installed in a single system. The Model 5000 architecture simplifies the task of creating applications which require concurrent math processing, disk, and analog I/O. The maximum continuous throughput to disk in data acquisition applications is a function of the host PC's disk system. Rates in the 200 KSamples/sec range are typical on standard systems
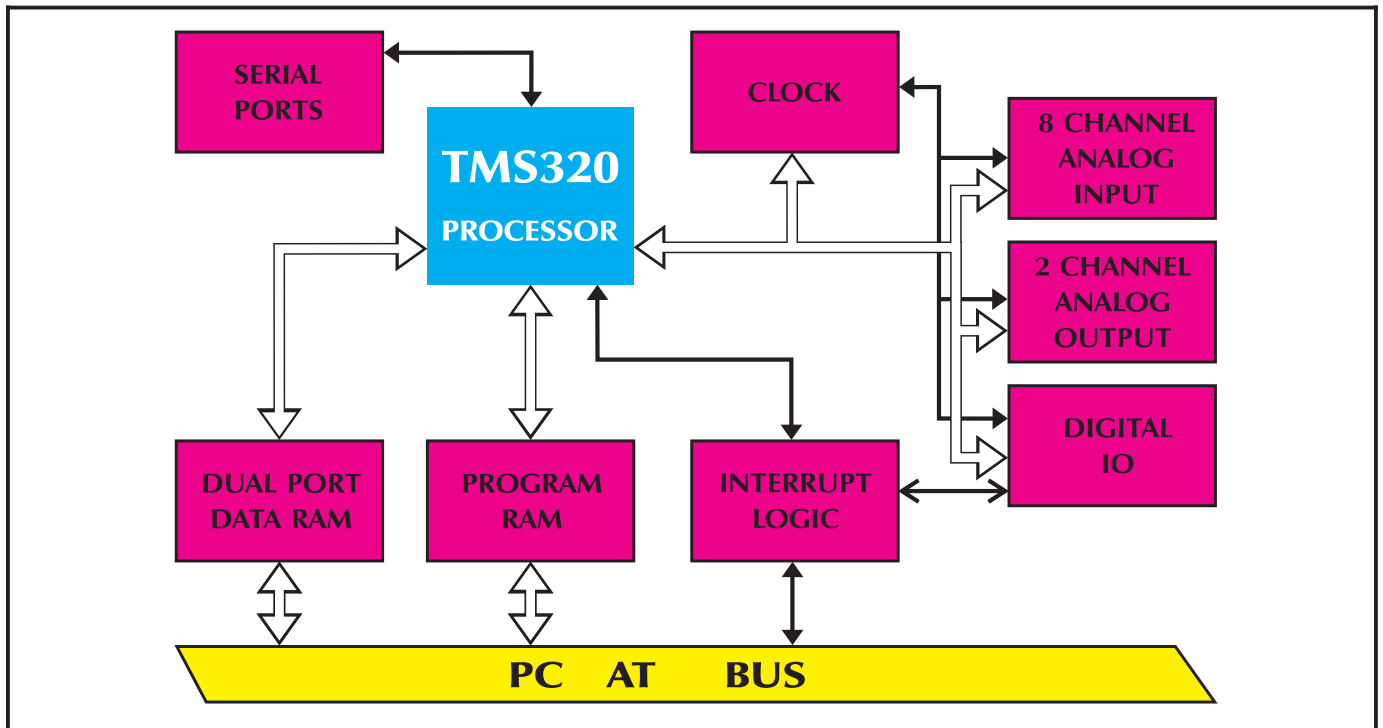
APPLICATIONS SOFTWARE

The following applications software is provided. In most cases source code is included, which the user can use as a model in creating applications.

- DISPLAY - Real time display of input signals and their power spectra.

- RECORD & PLAYBACK - Direct recording to and playback from disk.

- DATA ACQUISITION MANAGER - A full featured data acquisition package! Multi-channel record and playback. Simultaneous record and playback for stimulus/response applications, and advanced triggering options.

- FFT and Digital Filter Code Generator examples and utilities.

DEVELOPMENT SOFTWARE

All required development tools are included, as is an object file loader for use with the Assembler and C compiler from TI.

- A5000 Assembler - After successful assembly, loads the executable code directly into the Model 5000.

- D5000 Debugger - Includes inline assembler and disassembler, breakpoint, trace, single step, modification and viewing of memory and registers.

- Link Package - Board management functions in source code, linkable to most high level languages. Windows(TM) version included.

SPECIFICATIONS

Processor

- TI TMS320C51-80 (80 Mhz) fixed point DSP
- Option: Other pin compatible TMS320C5x series parts

Memory

- 64K words of 0 wait state Program RAM
- 128K words of 0/1 wait state Data RAM

Analog I/O

- 12 bit A/D converter with sample/hold and 8 channel single ended multiplexer
- 500 Khz maximum sample rate. Sample rate is programmed from the DSP
- Dual 12 bit D/A converter
- Voltage range is +/- 5V

Digital I/O

- Expansion bus for 16 bit digital data transfers, Model 250 compatible

Serial I/O

- TMS320 full duplex serial port
- TMS320 TDM port

Clocks

- Onboard programmable clock
- On chip (TMS320) programmable clock

Host Interface

- 16 bit IBM PC AT (ISA) bus
- I/O mappable on 8 Byte boundaries
- Model 5000 may interrupt host at one of 6 PC interrupt locations

Warranty

- 1 year warranty

DALANCO SPRY

www.dalanco.com • Ph (716) 473-3610 • Fax (716) 271-8380