



The evaluation system provides a complete environment for the development of high performance digital filtering and signal generation systems. The development system is based on the powerful Mitel Semiconductor's PDSP16350 and PDSP16256 digital signal processing components and comprises the following elements:

- An IBM PC compatible board for high performance digital filtering and signal generation
- A powerful digital filter design software package optimised to the specific characteristics of the PDSP16256 programmable FIR filter
- A flexible digital filter development software package enabling the board to be configured and operated in a wide range of modes
- Comprehensive supporting documentation

These facilities constitute an easy-to-use development tool for digital filtering systems requiring sample rates of up to 20MHz and provide an ideal environment for rapidly evaluating the capabilities of these high performance Mitel Semiconductor devices.

APPLICATIONS

The evaluation system is applicable to a wide range of areas, including:

- | | |
|--------------------|----------------------------|
| ■ Radar | ■ Sonar |
| ■ Ultrasonics | ■ Data communications |
| ■ Video processing | ■ Instrumentation |
| ■ Digital radio | ■ Satellite communications |

DIGITAL FILTERING BOARD

Key features of the IBM PC compatible board are as follows:

General

- 8- or 12- bit ADC versions
- Dual 12-bit DACs
- 16-bit data
- Real or quadrature modes of operation
- Sample rates between 1kHz and 200MHz
- Digital output ports

Digital Filtering

- Configurable as separate I and Q channels or as a single real only channel
- Cascaded or single filter options
- Filtering lengths between 8 and 128 coefficients (dependent on sample rate and configuration)
- Decimate by 2 mode

Signal Generation

- High resolution sine/cosine generation
- Supports amplitude modulation (AM) and frequency modulation (FM)
- High precision quadrature chirp signal generation

PDSP16256/PDSP16350 EVALUATION SYSTEM

DEVELOPMENT SOFTWARE

- Filtering designs optimised to the characteristics of the PDSP16256
- Cascaded, dual or single filter modes
- Frequency selective and Hilbert transform filters
- Bit-accurate frequency responses
- EPROM file generation
- Flexible board configuration options
- Filter coefficient loading
- Control of precision waveform generation
- Easy-to-use menu driven operation

ORDERING INFORMATION

The following options are available:

Part number	ADC sample rate	ADC resolution	No. of PDSP16256 ICs
PDSP DFDS-1	20MHz	8 bits	1
PDSP DFDS-2	20MHz	8 bits	2
PDSP DFDS-3	1MHz	12 bits	1
PDSP DFDS-4	1MHz	12 bits	2

All options include the following IBM PC compatible hardware and software:

- Digital filtering board
- Digital filter design package
- Digital filter development package
- Support documentation

Note Owing to the pending obsolescence of certain devices the supply of this evaluation board may be discontinued during the life of this handbook. Please confirm availability with your Mitel Semiconductor Customer Service Centre.



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