



Integrates with  
MatLab™ V5.3 or V6.0

FIR Filter Development Suite  
for SPPDM-01

## Description

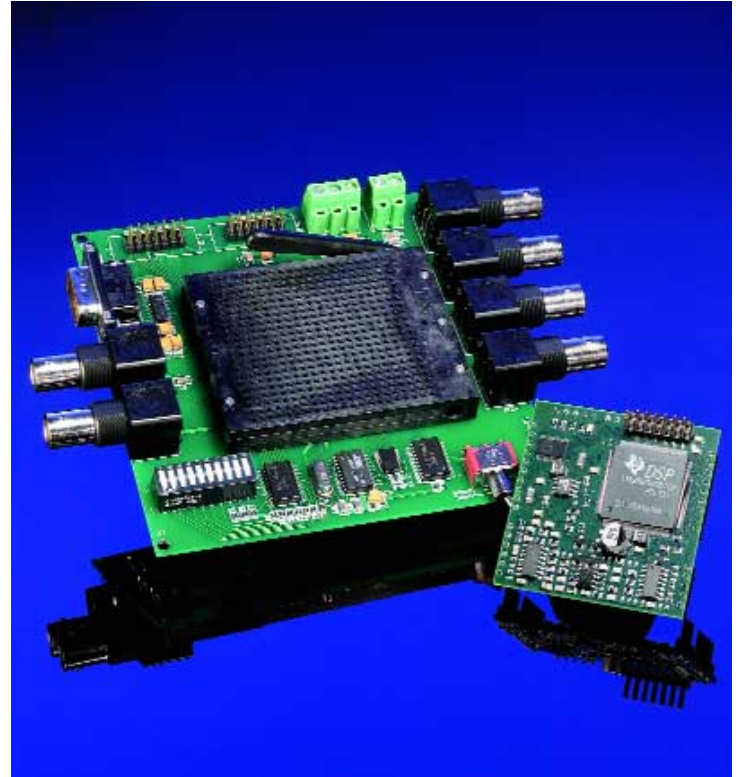
The SPPDF-01 is a Development Suite for the dual channel SPPDM-01 FIR filter platform. This provides a user-friendly design environment for development of Digital FIR filter solutions in the audio frequency range from 100 Hz to 20 kHz. By combining The MatLab™ mathematical engine environment and the SPPDF-01 development software, the suite enables the design engineer to take advantage of a proven hardware platform with a built in FIR filter to quickly and easily configure dual-channel application specific FIR filter solutions.

In a small 2" x 2" footprint, the versatile dual channel SPPDM-01, the brains of the SPPDF-01, provides two fully programmed FIR filters. After loading the filter coefficient sets via the SPPDB-01 development board, the SPPDM-01 can be easily removed and inserted directly into a production subassembly. This capability significantly reduces the time it takes to produce finished product solutions. SPPDM-01's combine 24-bit A/D's and D/A's with a powerful DSP, 4 megabits of flash memory and 256k bits of EEPROM for applications requiring low signal-to-noise ratios of > 96 dB, channel-to-channel phase match of 0.01°, and 9-bits of tuning per channel.

By utilizing the SPPDF-01 suite of products, design engineers have all the hardware and software tools to design, prototype and implement a broad range of FIR filter solutions in a standard footprint and form factor. This product development approach significantly reduces the time it takes to design an FIR filter (concept to production).

## Features/Benefits:

- Significantly reduces product development time by incorporating design and production capabilities into a single subassembly solution.
- Minimizes design time by offering standard and custom solutions in a universal footprint and pin-out.
- Combines small size and precision performance through the integration of real-time analog and DSP technology.
- Provides cost effective design flexibility by allowing engineers to easily revise products through software upgrades without replacing the hardware.



## SPPDF-01 DEVELOPMENT SUITE:

- **SPPDM-01:** Dual Channel FIR Filter Platform
- **SPPDB-01:** Development Board hardware
- **SPPDF-01:** FIR Filter Design Suite, which utilizes the SPPDM-01 and SPPDB-01 hardware along with CDDF-01 software.
- **CDDF-01:** Software includes; example FIR filters, a Matlab™ GUI linking the system to the Matlab™ Engine V5.3 or V6.0, FIR filter development object code, a coefficient file loading utility, library files, documents and a User's manual.
- **DB9 RS232 Cable**

## PROVIDED BY CUSTOMER:

- **Personal Computer**
- **MatLab™ V5.3 or V6.0**, for FIR filter design.

## OTHER FIR FILTER OPTIONS:

- **SPPPF-01:** A family of turnkey FIR filters available in a set of standard ranges.
- **Custom FIR Filters:** Turnkey FIR filters can be produced for the added cost of writing the code, see SPPPF datasheet.