## Description

Frequency Devices' Model VM8PF comprises a family of VMEbus filter boards offering eight channels of software programmable, precision linear analog filtering in a single width B-size (6U) VME form factor. VM8PF boards receive up to eight high level differential signal inputs through a shielded front panel connector and provide signal buffering and software programmable filtering with unity gain for each channel. A second connector is wired in parallel with the input connector to facilitate filter bypass. VM8PF boards may be configured with 4- or 8-pole filters in any one of five standard factory set tuning ranges from 1.0 Hz to 102.4 kHz, and with high- or low-pass transfer functions allowing user to externally cascade filters into band-pass configurations. The boards conform to VME revision C.1 as an A16/D16 Slave.

Features/Benefits:

• Simultaneous sampling over 8 channels provides a low cost, versatile and convenient way to control filtering and gain scaling.

• Solves precision performance problems of design engineers, system integrators and OEM's.

• Broad range of transfer characteristics and corner frequencies are offered to meet a wide range of applications.

• Low harmonic distortion and wide signal-to-noise ratio to 16-bit resolution.

Signal conditioning applications include:

• Engine test and simulation
• Automotive test cells
• Aerospace, navigation & sonar
• Laboratory R & D
• Acoustic and vibration analysis
• Satellite & Telecommunications
• Automatic test equipment (ATE)
• Industrial process control
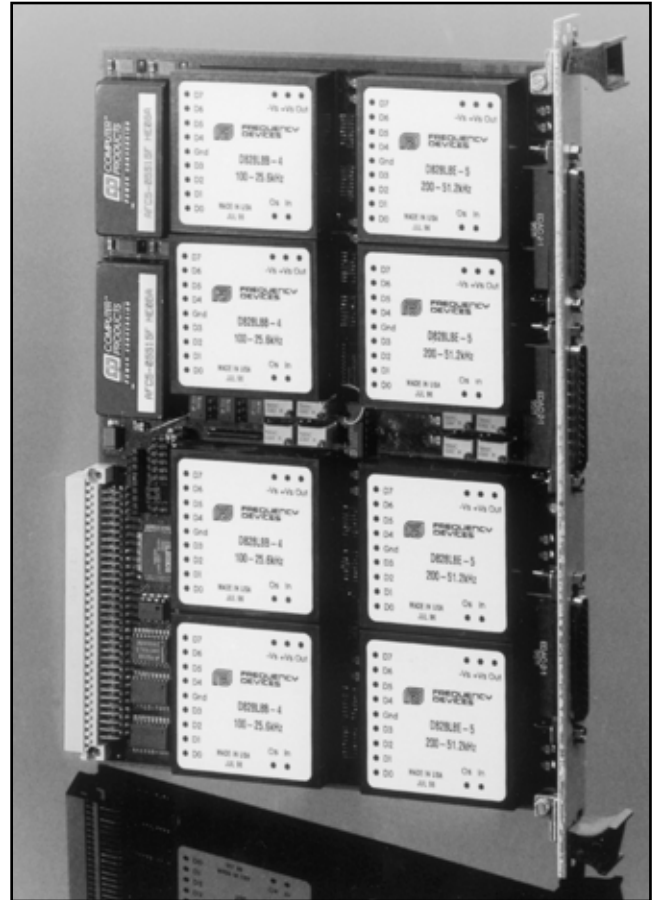
LOW-PASS FILTER OPTIONS
4-pole	D824
8-pole	D828

HIGH-PASS FILTER OPTIONS
4-pole	D824
8-pole	D828

BAND-PASS FILTER OPTIONS
2-pole pair	824BP
4-pole pair	828BP

BAND-REJECT (NOTCH) FILTER OPTIONS
4-pole pair	828BR

Ordering Information

Channels		Filter Type and Corner Frequency
4 or **8**		**D824** or **D828**

VM8PF-8-D828H8E-2

Specifications
(@ 25°C and rated Power Input)

8 CHANNEL PROGRAMMABLE FILTER BOARD

Analog Input
1.	Impedance	1 MΩ
2.	Input Range	+/-10V pk. linear
3.	Maximum Input	+/-15V
4.	Common Mode Rejection	70 dB typ., 60dB min. DC to 1 kHz

Analog Output
5.	Impedance	1 Ω typ., 10 Ω max.
6.	Linear Operating Range	+/-10V pk.
7.	Channel to Channel Crosstalk	-95 dB typ. DC to 100 kHz
8.	Maximum Current	+/-2mA
9.	Offset Voltage	+/-2mV typ. trimmable to zero
10.	Short Circuit Protection	Short to Ground

Filter Characteristics
11. See 824 and 828 Series specifications
12. External 8-bit CMOS latches hold frequency data

Gain
13.	Low-pass	X1, +/-1%
	High-pass	X1, +/-2%

VMEbus
14. Interface   A16/D16, D08(EO) Slave only, VME Spec. Rev. C.1

Power Supply
15. From VME Backplane   +5V, 3.5A max.

Environmental
16.	Operating	0°C to +70°C
17.	Storage	-25°C to +85°C
18.	Humidity	0-95% non-condensing

Mechanical
19.	Card Size	VMEbus 6U single slot 9.17 x 6.3 inches, (233 x 160 mm)
20.	No. of Input Channels	8 Differential - DC coupled
21.	No. of Output Channels	8 Single Ended - DC coupled
22.	Mating Connectors	25-pin "D", Quantity 3
23.	Weight	3 lbs., (1.36 kg.)