



### 8-Channel

#### 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  
4 or 8

Filter Type and Corner Frequency  
D824 or D828

### VM8PF-8-D828H8E-2



## Specifications

## Programmable VME Filter Board

(@ 25°C and rated Power Input)

### 8 CHANNEL PROGRAMMABLE FILTER BOARD

#### Analog Input

- |                          |                                   |
|--------------------------|-----------------------------------|
| 1. Impedance             | 1 M $\Omega$                      |
| 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 $\Omega$ typ., 10 $\Omega$ 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

- See 824 and 828 Series specifications
- External 8-bit CMOS latches hold frequency data

#### Gain

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

#### VMEbus

- |               |   |
|---------------|---|
| 14. Interface | A16/D16, D08(E0) 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.)                                      |