FREQUENCY DEVICES™, INC.

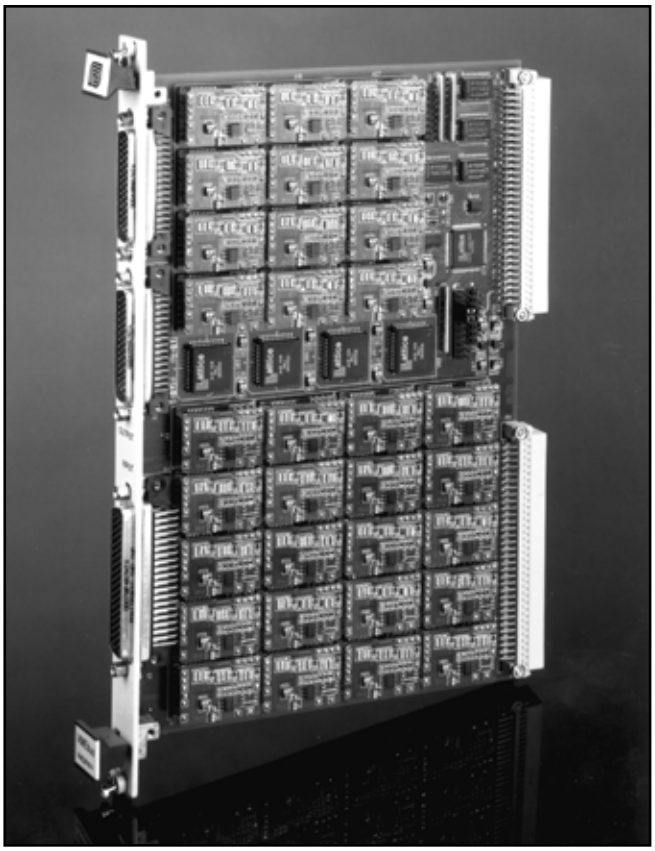
Model VM2.0PAFF

Programmable Amplifiers with Fixed Frequency Filters >100 kHz to 2.0 MHz VME Board

32 Channel

Description

Frequency Devices' Model VM2.0PAFF comprises a family of VMEbus amplifier/filter boards offering software programmable differential amplifiers combined with precision 4-pole Butterworth or Bessel linear analog filters in a single width B-size (6U) VME form factor. VM2.0PAFF boards provide simultaneous access to 32, DC-coupled wideband signals while providing programmable gain from –12dB to +36dB in 6dB steps and fixed frequency filters with corner frequencies from >100 kHz to 2.0 MHz. VM2.0PAFF boards may be configured with 8, 16, or 32 channels. The boards conform to VME revision C.1 as an A16/D16 Slave. Available options include AC-coupled input.



Features/Benefits:

- Simultaneous access over 32 channels offers a low cost, versatile and convenient way to provide amplification and filtering.
- Three active read/write registers provide programming and set-up verification.
- Phase match of ±2.0° and gain accuracy of ±0.1dB provides precision performance solutions to design engineers, system integrators and OEM's.
- Four pole Butterworth or Bessel transfer functions with broad range of corner frequencies to meet a wide range of applications
- High channel count density without sacrificing performance maximizes chassis utilization.

Signal conditioning applications include:

- Sonar, navigation and aerospace
- Engine test and simulation
- Acoustic and vibration analysis
- Satellite and telecommunications
- Laboratory R & D
- Automatic test equipment (ATE)
- Industrial process control

AMPLIFIER/FILTER OPTIONS

PGAB5-2.0	-12 dB to +36 dB in 6 dB steps Butterworth 4-pole, >100 kHz to 2.0 MHz
PGAL5-2.0	-12 dB to +36 dB in 6 dB steps Bessel 4-pole, >100 kHz to 2.0 MHz

Ordering Information

8, 16, or 32 **Channels**

Optional

A- AC Coupled Input

VM2.0PAFF-32 – PGAL5-2.0-1.75 MHz-A

-3 dB Corner Frequency

e.g.>100kHz to 2.0 MHz

25 Locust St, Haverhill, Massachusetts 01830 • Tel: 800/252-7074, 978/374-0761 • FAX: 978/521-1839
e-mail: sales@freqdev.com • Web Address: http://www.freqdev.com

FREQUENCY DEVICES™, INC.

Model VM2.0PAFF

WIdeband Programmable Gain Amplifier with Fixed Frequency Filter

Specifications

(@ 25°C and rated power Input)

32 CHANNEL VME SIGNAL CONDITIONING BOARD

Analog Input	
1. Impedance	1 MΩ//22 pF
2. Maximum Input	20V pk-pk each leg
3. Linear Input Range	±8V pk
4. AC Couple (Optional Fixed Freq.)	20 Hz to 1.0 kHz
5. CMRR	≥ 50 dB, DC to 100 kHz ≥ 40 dB, DC to 2 MHz
Analog Output	
6. Impendance	1.0Ω typ., 10Ω max.
7. Offset Voltage	25 mV typ., 50 mV max.
8. Linear Operating Range	±4V into 500Ω
9. Offset Temp. Coeff.	±(5 + 100/G) μV/°C max.
Filter Characteristics	
10. Anti-Alias Filtering	Fixed frequency 4-pole low-pass Butterworth or Bessel
11. Cut-off Frequency fc (-3dB)	>100 kHz to 2.0 MHz
12. Amplitude Match*	±0.2 dB @ DC
13. Phase Match*	2.0° max. @ fc
14. Noise Voltage Density, RTI	25nV/√Hz@ 1 kHz
15. Distortion (2 V pk-pk)	≤ -60 dB to 100 kHz ≤ -50 dB, 100 kHz to 2.0 MHz
Gain	
16. Gain Programming (G)	0.25X to 64X in factors of 2:1 (before filtering) 32 channels programmed over VMEbus with read-back
17. Gain Accuracy @ DC	±0.1 dB max.
VMEbus	
18. Interface	A16/D16, D08 (EO), Slave
19. Registers	Three active R/W registers in 64 byte blocks
Power Supply	
20. From VME Backplane	+5V – 1.0A max. ±12 – 0.7A max. each
Environmental	
21. Operating Temp.	0°C to +70°C
22. Storage Temp.	-25°C to +85°C
23. Humidity	0-95% non-condensing
Mechanical	
24. Card Size	VMEbus 6U single slot 9.17 x 6.3 inches, (233 x 160 mm)
25. No. of Input Channels	32 – DC coupled
26. No. of Output Channels	32 Single ended – DC coupled, Two groups of 16
27. Mating Connectors	Input: Male high density 78-pin D sub, Quantity 1 Output: Female high density 44-pin D sub, Quantity 2
28. Weight	1 LB., (454 grams)

*Any two channels set to same gain and loading

We hope the information given here will be helpful. The information is based on data and our best knowledge, and we consider the information to be true and accurate. Please read all statements, recommendations or suggestions herein in conjunction with our conditions of sale which apply to all goods supplied by us. We assume no responsibility for the use of these statements, recommendations or suggestions, nor do we intend them as a recommendation for any use which would infringe any patent or copyright.

25 Locust St, Haverhill, Massachusetts 01830 • Tel: 800/252-7074, 978/374-0761 • FAX: 978/521-1839
e-mail: sales@freqdev.com • Web Address: http://www.freqdev.com