

6U - Compact PCI

Description

Frequency Devices Model CPCI32FF is a single width B-sized (6U) form factor Compact PCI filter/gain board offering 32 channels of fixed frequency analog filters. Each CPCI32FF board can be configured with up to 32 single ended or differential input signals and a corresponding number of single ended or differential outputs. Customer can select one of the factory set gain options of 1X, 10X, 100X or 1000X for each CPCI32FF. Boards may be populated either with 2-pole D72 or 4-pole D74 high-pass and low-pass fixed frequency filters from 1 Hz to 100 kHz, allowing the user to externally cascade filter pairs into as many as 16 band-pass channels. Each channel provides low harmonic distortion and wide signal-to-noise ratio to 12-bit resolution.

Features/Benefits:

- Simultaneous access to 32 channels offers a low cost, versatile and convenient way to provide amplification and filtering.
- Inter-channel crosstalk <-80 dB provides precision performance solutions to design engineers, system integrators and OEMs.
- 2- and 4-pole Butterworth or Bessel transfer functions with a broad range of corner frequencies are offered to meet a wide range of applications.
- High channel count density without sacrificing performance maximizes chassis utilization.
- Both Inputs and outputs may be configured either single ended or differential for maximum flexibility.
- Jumper selectable commons for best system configuration: Analog floating, front panel or backplane ground.

Signal conditioning applications include:

- Industrial process control
- Engine and test simulation
- Acoustic vibration analysis & control
- Satellite and telecommunications
- Automatic test equipment (ATE)
- Aerospace, navigation & sonar
- Automotive test cells

32 Channel Filter Board



Available Low-Pass Models:

2-pole D72, DP72 4-pole D74, DP74

Available High-Pass Models:

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2-pole		D72
4-nole		D74

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Specification

(25oC and Vs+15 Vdc)

32 Channel Filter Board

Analog Input

 $\begin{array}{ccc} \text{1. Impedance} & \text{1 } \text{G}\Omega\,/\,\text{47pF} \\ \text{2. Input Range} & \pm \text{10V pk. linear} \end{array}$

3. Maximum Input $\pm 40V$

4. Common Mode Rejection 75 dB min. @ 60 Hz.

Analog Output (each leg)

5. Impedance 1.0 Ω typ., 10 Ω max.

6. Linear Operating Range $\pm 10 \text{V pk}$.

7. Channel to Channel Crosstalk <-80 dB max. @ 10 kHz

8. Maximum Current ±5mA

9. Offset Voltage ± 5 mV max. 10. Offset Temp. Coeff. ± 0 mV/°C

11. Short Circuit Protection Short to Ground

12. Peak Distortion @ 1 kHz, 3.54 Vrms

Filter Characteristics

13. Fixed Cut-off Frequency fc (-3dB) 1.00 Hz to 100 kHz

See D72 or D74 Series specifications

14. Nominal Gain 1X, 10X, 100X, 1000X – Factory set

15. Accuracy $\pm 1\%$

Power Supply

Gain

16. From CPCI Backplane +12 V and -12 V, \pm 5%, 1.0 A max. each

17. Isolation (default)

Analog ground isolated from back plane and chassis.

Connection to ground/backplane common by jumper.

-80 dBc max.

Environmental

18. Operating $0^{\circ}\text{C to } +70^{\circ}\text{C}$ 19. Storage $-25^{\circ}\text{C to } +85^{\circ}\text{C}$

20. Humidity 0-95% non-condensing

Mechanical

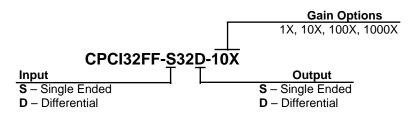
21. Card Size CPCI 6U single slot 9.17 x 6.3 inches, (233 x160 mm)

22. No. of Input Channels
 23. No. of Output Channels
 24. Mating Connectors
 32 Single or differential, DC coupled
 Input: Female high-density 78-pin D-sub

Output: Male high-density 78-pin D-sub

25. Weight ~2 lbs., (0.91 kg.)

Ordering Information



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