

6U - Compact PCI

32 Channel Filter Board

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



Available Low-Pass Models:

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

Available High-Pass Models:

2-pole	D72
4-pole	D74

Specification
(25oC and Vs+15 Vdc)

32 Channel Filter Board

Analog Input

- | | |
|--------------------------|----------------------|
| 1. Impedance | 1 G Ω / 47pF |
| 2. Input Range | \pm 10V pk. linear |
| 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 10V pk. |
| 7. Channel to Channel Crosstalk | <-80 dB max. @ 10 kHz |
| 8. Maximum Current | \pm 5mA |
| 9. Offset Voltage | \pm 5mV max. |
| 10. Offset Temp. Coeff. | 20 μ V/ $^{\circ}$ C |
| 11. Short Circuit Protection | Short to Ground |
| 12. Peak Distortion @ 1 kHz, 3.54 Vrms | -80 dBc max. |

Filter Characteristics

- | | |
|---------------------------------------|--|
| 13. Fixed Cut-off Frequency fc (-3dB) | 1.00 Hz to 100 kHz
See D72 or D74 Series specifications |
|---------------------------------------|--|

Gain

- | | |
|------------------|------------------------------------|
| 14. Nominal Gain | 1X, 10X, 100X, 1000X – Factory set |
| 15. Accuracy | \pm 1% |

Power Supply

- | | |
|-------------------------|---|
| 16. From CPCI Backplane | \pm 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. |

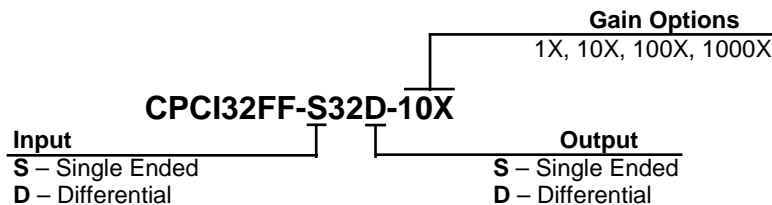
Environmental

- | | |
|---------------|--------------------------------------|
| 18. Operating | 0 $^{\circ}$ C to +70 $^{\circ}$ C |
| 19. Storage | -25 $^{\circ}$ C to +85 $^{\circ}$ 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 | 32 Single or differential, DC coupled |
| 23. No. of Output Channels | 32 Single or differential, DC coupled |
| 24. Mating Connectors | Input: Female high-density 78-pin D-sub
Output: Male high-density 78-pin D-sub |
| 25. Weight | \sim 2 lbs., (0.91 kg.) |

Ordering Information



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.