

- Easy to use
- Input Gain to 60dB
- AC / DC input coupling
- 2 Independent Channels
- IEPE (ICP[®]) transducer power
- Fits in Kemo 21 Series Racks
- Single ended / differential Input
- Up to 40 channels per rack
- 3 manually selectable frequencies with 1200 filter modules
- 255 manually selectable frequencies with 1600 filter modules



The Kemo CardMaster 21.2 is a 2 channel filter card, using Kemo filter modules. Each channel is configurable with, single ended or differential input, AC/DC coupling, pre filter input gain, and IEPE (ICP[®]) transducer supply, all set individually for each channel.

The CardMaster 21.2 is designed for use with the Kemo 1200 Series filters, or the Kemo 1600 programmable series of filters. These modules are available with a wide range of filter responses to meet a range of applications, many held as stock. Filter modules are available in lowpass, highpass and notch versions.

The two channels may be internally linked for applications where bandpass filters are defined using high pass and low pass filter modules. With 1200 Series filter modules 3 selectable frequencies, f_a , f_b , f_{a+b} , are set by on board switches. With 1600 series filter modules 255 frequencies are set by on board dip switches. 1600 filter modules are available in several frequency ranges, covering filter frequencies from 0.2 Hz to 500 kHz. .

A single CardMaster 21.2 card can be fitted to a Kemo MiniRack, or 21 in a Kemo 21.20 rack, as shown above. The 21.20 rack is available in main powered or DC versions for portable or mobile use.

Applications

- Conditioning IEPE (ICP[®]) Accelerometer signals, ideal for condition monitoring systems.
- Local filtering and amplification in systems
- Fixed or semi fixed filtering
- Configurable front end for data acquisition systems
- OEM uses to filter noise
- Bandpass filtering

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Specification

Electronic: Typical values after 30 minute warm up at 20°C ambient temperature

Filter Frequency	Available from DC to 500kHz
Filter setting	1200 Modules – 3 settings f_a , f_b , f_{a+b} , 1600 Modules 255 steps set by dip switch
Input Gain	0 - 60 dB, selectable by one resistor per channel.
Input	Single ended/differential input. Coupling DC, AC. (AC coupling matched for differential input) IEPE (ICP®) 24V, 1 – 10 mA selectable.
Signal Level	Signal +/- 10 Volt.
Trim Adjustments	DC Offset, Gain, both by 10 turn pot.
Output Attenuation	User defined by two resistor network.
Connectors	BNC in and out
Operating Temperature	-10 to 45 °C, non condensing.
Dimensions	. Kemo 21 Series Rack 1 slot (100 mm x 160 mm x 20 mm)

Ordering Information and Filter Responses

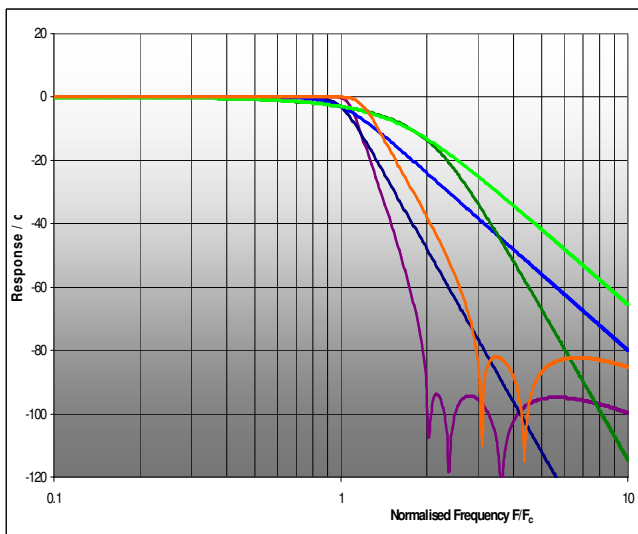
The CardMaster 21.2 is available with a range of filter responses. When ordering select fixed (1200 modules) or variable frequency (1600 modules) the frequency range and a suitable filter response.

Some response types are shown below and can be ordered as:-

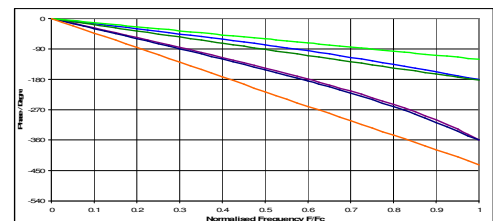
- 05** 4 pole Butterworth, 24 dB/Octave, monotonic stopband.
- 03** 8 pole Butterworth, 48 dB/Octave, monotonic stopband.
- 09** 4 pole Bessel, 24 dB/Octave, monotonic stopband.
- 07** 8 pole Bessel, 48 dB/Octave, monotonic stopband.
- 13** Elliptic type response, 94 dB/Octave, - 90 dB stopband.
- 41** Flat, linear phase response, 52 dB/Octave, - 80 dB stopband.



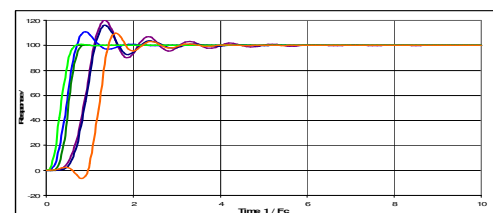
Two channel CardMaster 21.2 in compact mini rack.



Some CardMaster 21.2 Filter responses



Some CardMaster 21.2 Filter Phase responses



Some CardMaster 21.2 Filter Step responses

Due to continued product development Kemo Limited reserve the right to change specification without notice.