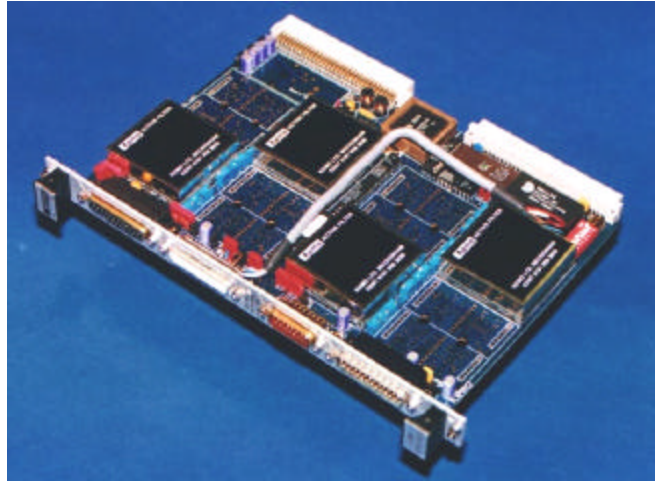


- Programmable Gain to x 800
- 255 programmable filter steps
- Cut-offs from 0.2 Hz to 255 kHz
- Text based RS232 control
- 8 Channels of 8 pole filters
- Windows Driver
- Single Ended/Differential Input
- Expandable to 128 channels
- AC/DC coupling
- Bypass and Ground modes
- 1 – 128 Channels per system
- Independent of VME Operating system
- Wide selection of filter responses and frequencies



The Kemo 6UG/1600 is an 8 channel VME filter card RS232 with programmable gain and filter cut-off frequency. It includes many detail features which make system integration easy, learnt during the 30 plus years we have been making multi -channel filter systems. The 6UG/1600 is controlled by an easy to use RS 232 interface and a high level text based 'FICL' command set. The 6UG/1600 is independent of the VME operating system and control bus, it only takes +5 V power from the VME bus. The 6UG/1600 uses Kemo 1600 series filter modules, with 255:1 linear filter span, or the pseudo logarithmic 1600W filter modules with 100 filter steps spread over a 1792:1 frequency range. The filter modules plug into the 6UG/1600, allowing for future changes in filter characteristics if required. Low distortion, high dynamic range filter responses are available for anti-aliasing, time domain, general purpose filtering, as well as more traditional Bessel and Butterworth filters. Filter cut offs are available from 0.2 Hz to 255 kHz, in a range to suit a wide range of applications. Gain, filter cut-off, input coupling, 'bypass' and 'input grounding' can all be individually programmed for each channel.

#### Applications

- Anti-Aliasing filtering
- Front ends for Data Acquisition systems
- Signal Reconstruction filters
- Sound and Vibration systems
- Laboratory R & D
- Sonar underwater signal processing

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

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## Windows Driver

The 6UG/1600 card is supplied with a Windows driver. This driver allows easy set up of the frequency, gain, and input coupling. The software can store and recall set ups. Individual or multiple channels can be programmed. Once set up instructions have been sent to the card, each channel is read to provide a traceability path for quality control. Filter set up data is stored as an ASCII file which can be read into a range of programmes, such 'Word' and 'Excel'

## Inputs and Outputs

Signal input and output are industry standard 25 way D-type connectors, the pinouts are arranged logically to make input and output wiring easy. If required input and output cables can be mated directly together for system testing. The 6UG/1600 has differential input, single ended input is easy to set by wiring the 'negative signal' differential input to the signal zero volts. AC / DC input coupling is computer controlled. The signal input to each channel can be programmed to 'ground', for noise reduction. A fixed, (not computer controlled) 4 mA 24 Volt IEPE transducer supply can be hard wired to the 6UG/1600. (requires external 24V supply)

## Filter Responses

Most standard Kemo filter responses can be supplied fitted to the 6UG/1600. For anti-aliasing applications, Response 01 flat passband and 135dB/octave slope is recommended. For general purpose applications Response 41 with flat passband and linear phase is recommended. Traditional Butterworth and Bessel responses are available.

## Specification

Typical values

Size	233 x 160 mm (VME Rev c1) 0.8" slot
Weight	0.6 kg
Supply Voltage	+5 V
Supply Current	3.0 A
Input Impedance	1 M $\Omega$
Input	Single ended or differential
Input Coupling	AC or DC (hardwired optional IEPE)
Input Modes	Filter, Bypass, or Ground.
Output Impedance	50 $\Omega$
Signal Voltage	> +/- 10V
Output Current	10 mA (maximum)
Output Offset	< 1 mV across filter range
Output Noise	See Filter Modules data sheet
Frequency Control	255 linear steps, or 100 pseudo-logarithmic steps
Frequency Ranges	Standard 'Base' frequencies of:- 0.2, 1, 2, 5, 10, 20, 50, 100, 200, 500 Hz,
Gain	3 programmable ranges 0.25 – 7.75 in steps of 0.25 5 – 80 in steps of 5 50 – 800 in steps of 50
Signal Connectors	25 way 'D' type
Interface	RS 232 300 – 9600 Baud Normal configurations supported
Control Code	'FICL' ASCII text based commands



6UG/1600 cards are manufactured using high precision, tried, quality components, on a gold plated multi-layer circuit board to reduce noise, and surface mount technology for reliability and long life.

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