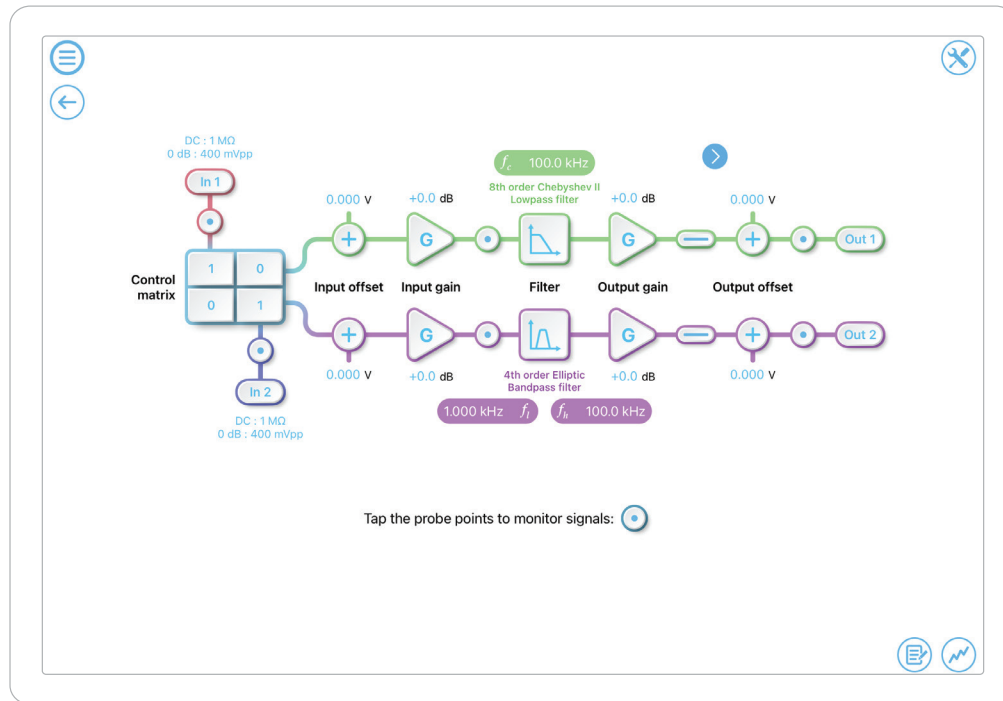




Digital Filter Box

With Moku:Pro's Digital Filter Box, you can interactively design and generate different types of infinite impulse response filters with sampling rates of 305.18 kHz or 39.063 MHz. Select between lowpass, highpass, bandpass, and bandstop filter shapes with up to eight fully configurable types including Butterworth, Chebyshev, and Elliptic. This instrument can be deployed independently or used as filter components in the multi-instrument mode.



Sampling Rate
305.18 kHz or 39.063 MHz

Filter Order
2, 4, 6, 8

Input Range
up to 40 Vpp

Output Voltage Range
10 Vpp into 50 Ω

Filter Shapes
Lowpass, Highpass, Bandpass,
Bandstop, Custom

Features

- Visualize your signal and configuration in real-time: design your filter's frequency response using the interactive Bode plot
- Block diagram view of the digital signal processing with built-in probe points for signal monitoring
- Versatile input and output options: 4 input channels, 4 output channels with optional blending for input signal mixing
- Supports custom filter designs
- Built-in Oscilloscope and Data Logger

Specifications

- Filter shapes: lowpass, highpass, bandpass, bandstop
- Filter types: Butterworth, Chebyshev I, Chebyshev II, Elliptic, Cascaded, Bessel, Gaussian, and Legendre
- Corner frequencies: 58.63 mHz - 17.58 MHz
- Input-output latency: sub-microsecond
- Passband ripple: configurable 0.1 – 10 dB
- Stopband attenuation: configurable 10 – 100 dB
- Independently adjustable input and output offsets and gains

Applications

- System design
- Closed-loop control
- Noise filtering
- Signal amplification
- Filter design and evaluation