

CerePlex™ A

Introducing CerePlex™ A: a high-channel, low-noise, quasi-DC amplifier designed with simplicity, flexibility, and miniaturization in mind.

CerePlex™ A is Blackrock Microsystems' next-generation, digitizing amplifier for interfacing neural electrodes directly (macroelectrodes), or via analog headstages (microelectrodes), to any of Blackrock Microsystems' data acquisition systems.

The innovative amplifier boasts flexible, analog-reference electrode selection for optimal removal of environmental noise, and artifacts prior to analog-to-digital conversion. A quasi-DC operation for recording distortion-free signals down to near DC, and integrated, electrode-impedance measurement for interrogating Blackrock Microsystems', or 3rd party electrodes, all in a compact design (6 cm x 12 cm x 1.5 cm).

For experiment designs that include electrical neural stimulation, CerePlex™ A's fast-settle circuit ensures high-quality neural recordings (spikes and field potentials) immediately after stimulation.

CerePlex™ A: a new generation of amplifier solutions.



Specifications

Neural Signal Inputs	128
Input Connectors (bank A-D)	QSE, dual row, 40 pins, male
Input Connectors (GND, X REF)	1.5mm touch proof, male
Input Range	± 8 mV
A - D Conversion	30 kHz, 16 bits (0.25 µV/bit resolution)
Input-Referred Noise	3 µV _{rms}
Filter Characteristics	1 st order Butterworth (high pass) 4 th order Butterworth (low pass)
Input Frequency Range	0.3 Hz - 7.5 Hz / 0.05 Hz - 10 kHz (user selectable)
Output Connector	HDMI-D, female
Electrode-Impedance Measurement	2 MΩ >Z> 10 kΩ @ 1kHz (with supplied cable)
Fast-Settle Circuit	BNC TTL input

Compatibility

The CerePlex™ A is fully compatible with any of the following Blackrock Microsystems accessories:

- » NeuroMotive™ System
- » CerePlex™ Direct System (animal)
- » Cerebus™ (animal)