# NeuroMotive

BLACKROCK™
MICROSYSTEMS

NeuroMotive is a sophisticated digital video tracking system for capturing audio, video, tracking coordinates, and user-inserted events (e.g., seizure onset, task completion, drug delivery, object recognition) during experiments with behaving subjects. Camera options support video capture and multi-object tracking in light or dark environments with frame rates up to 100 Hz.

When combined with the Cerebus or NeuroPort data acquisition system, NeuroMotive enables researchers to simultaneously monitor behavior and neurophysiology. The two synchronized data streams are available in real-time for visualization, analysis, and closed-loop applications.

Advanced DVD-like playback features facilitate comprehensive video-based review and editing of event records to ensure accurate information before exporting the neural data for event-related analyses.

Applications

Example Applications
Behavioral and neurophysiological studies of

>> Drug addiction
>> Learning and memory
>> Object recognition
>> Decision making
>> Fear conditioning
>> Anxiety
>> Social interactions
>> Locomotion
>> Epilepsy, Parkinson's
>> Sleep

Key Features

>> Color and infrared digital video
>> Digital audio
>> Supports multiple cameras
>> Multi-object tracking in light or dark environments
>> Synchronized neural recordings
>> Keyboard input of annotations and user-defined events
>> DVD-like playback and editing
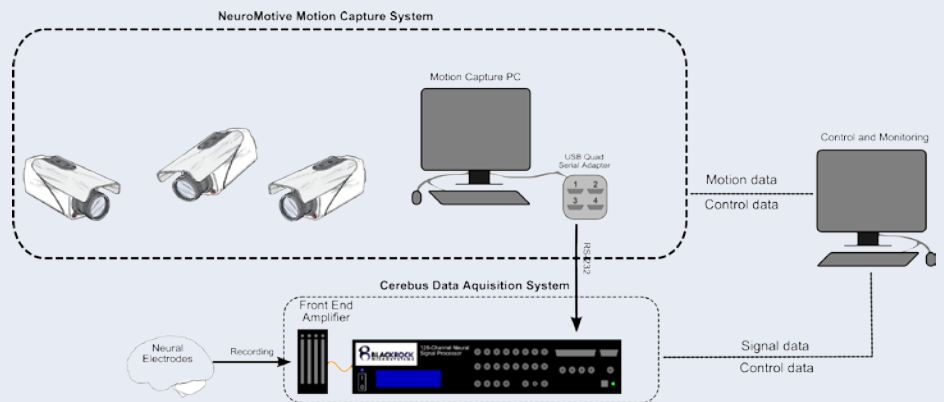
Simultaneous monitoring of behavioral and neurophysiology

Specifications

Camera Specifications

Maximum Resolution	1,600 (H) x 1,200 (V)
Maximum Frame Rate	100 Hz
Lens Mount	C
Video File Formats	AVI, MJPEG
Lighting	Visible, Infrared
Tracking Distance	Minimum - 2 ft (0.6 m), Maximum - 20 ft (6.1 m)
API Type	C/C++ DLL

Synchronized DVD-like playback of **animal video tracking** and **neural signals**
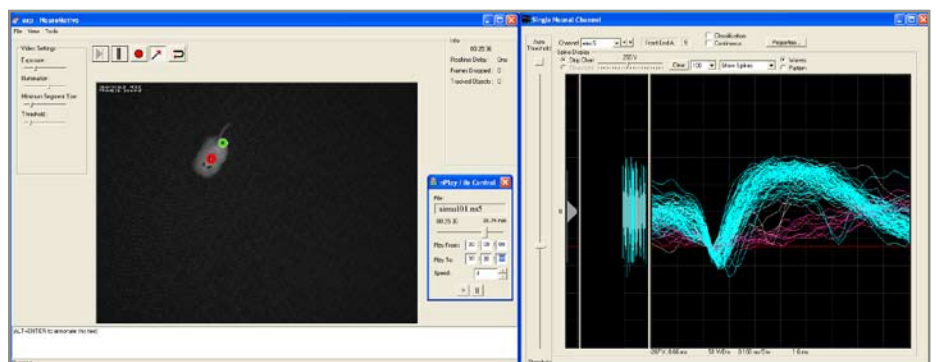
Complete NeuroMotive System   1 NeuroMotive PC (MCPC), 1 NeuroMotive software CD-ROM, 1 OptiTrack™ Camera, 1 Synch Splitter, 1 USB cable 5 reflective optical tracking markers, 1 calibration square, 1 calibration wand