



Neuralynx

advanced electrophysiology solutions

neuralynx.com / sales@neuralynx.com - Bozeman, Montana

FreeLynx™ configurable wireless acquisition system

Our revolutionary FreeLynx is **the** digitally transmitted wireless acquisition system for freely moving untethered subjects. FreeLynx provides 32 to 256 *configurable* channels of wide bandwidth wireless neural recording and real-time signal processing with reliable transmission up to 10 meters, depending on environment.

Very flat frequency response extends from 0.1 Hz to 8 kHz from each electrode to accurately record both low-frequency Alpha and Theta oscillations, and high-frequency Single Unit Action Potentials.



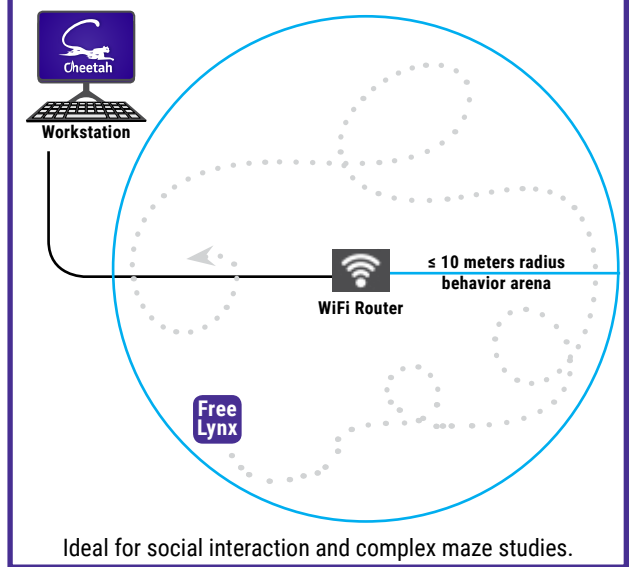
Features:

- 30 kHz, 16 bit data acquisition
- Dual 9-axis accelerometer
- Omni-directional video tracking LEDs
- Setup options for weight distribution on subject
- Easy swap batteries with minimal recording downtime and fast reboot
- Switch between 2 modes of operation *at any time*:
 1. onboard microSD card – increasing battery runtime by 30%
 2. wireless transmission, up to 10 meters

Comprehensive line of accessories, including:

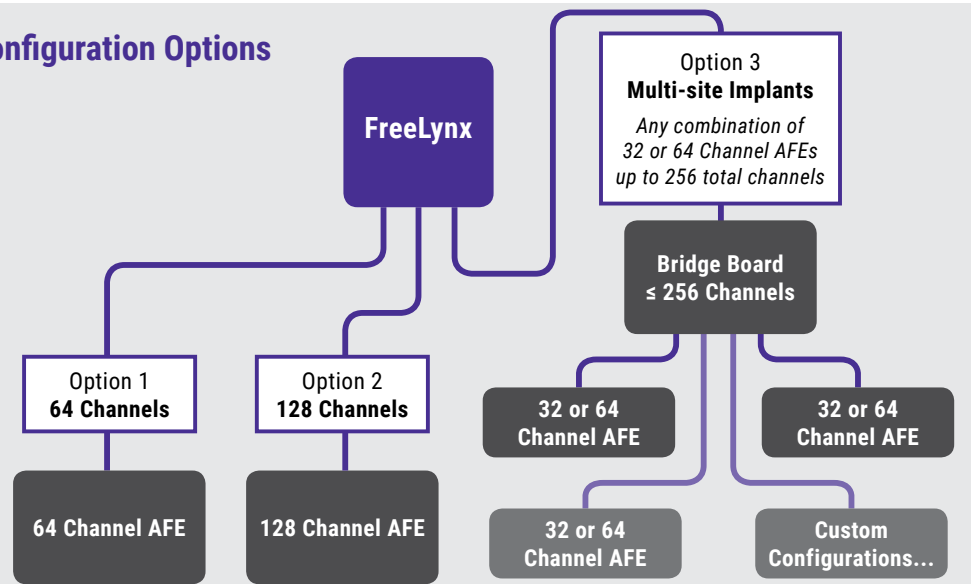
- Rechargeable battery options for up to 24+ hour recording
- Power tether for continuous recording without battery
- Receiver and transmitter for remote power control
- Securely mounted self-aligning QuickClip® EIBs

Untethered Acquisition



FreeLynx Analog Front End (AFE) Configuration Options

FreeLynx utilizes a separate, customizable Analog Front End (AFE) interface that easily adapts to multiple FreeLynx standard configurations. This enables the user to optimize weight distribution, record from multiple implant sites, adapt to varying channel counts, or incorporate animal physiology sensors. With this technology, Neuralynx is able to rapidly develop custom AFEs – in 32 channel increments - to meet specified multi-site implant requirements.





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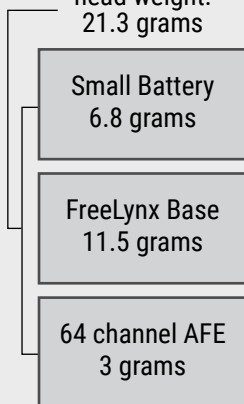
Specifications	
Size	≈ 30 mm x 30 mm x 35 mm
Weight	≈ 21.3 grams (smallest battery)
Transmission Range	up to 10 meters, depending on environment
Resolution	16 bit
Sample Rates	up to 30 kHz per channel
Frequency Range	0.1 Hz - 8 kHz from each electrode
Input Range	+/-5 mV
Low Noise	< 2.5 μV RMS (input referred)
Power Source	quick-change battery or power tether with no hassle swap
Battery Run Time	30 minutes to 24+ hours, depending on battery

Component Mass	
FreeLynx Base	11.5 grams
Shield	3 grams
64 channel AFE	3 grams
128 channel AFE	6 grams
0.5 hr Battery	6.8 grams
1.5 hr Battery	15 grams
3 hr Battery	30 grams
EIB (large pins)	1.6 grams
EIB (small pins)	1.4 grams

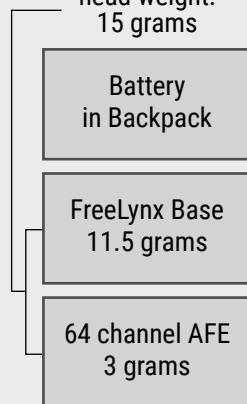
Weight distribution options:



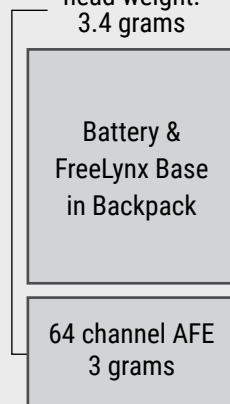
head weight:
21.3 grams



head weight:
15 grams



head weight:
3.4 grams



"Our lab has experimented with a number of wireless data acquisition systems for both rodent and primate electrophysiology. We are very pleased with the recording quality and overall performance of Neuralynx's [FreeLynx] - which we find to be virtually indistinguishable from traditional wired systems. We would happily recommend this device for any researcher seeking a reliable and user friendly system for performing wireless electrophysiology recording."

Carol A. Barnes, Ph.D.
Director, ARL Division of Neural Systems, Memory and Aging, University of Arizona

"The [FreeLynx] works perfectly! It allows for a much larger range of motion than our previous tethered system, and adult rats get used to it within about a week. This wireless device will open the door for new experimental paradigms that were not possible before."

Jean-Marc Fellous
Computational and Experimental Neuroscience Laboratory
University of Arizona

Once you hold the device in your hand and see the quality of signal transmission, you'll want to go wireless with FreeLynx!