

advanced electrophysiology solutions for data acquisition & experiment control

FreeLynx™

Reliable, High-Density, Wide Bandwidth Telemetry

Our subject-mounted, battery-powered, wireless headstage sets your research free of restrictive tethers by transmitting neural data wirelessly. Designed for exceptional performance, FreeLynx does not require the use of a faraday cage. Just secure it to your animal interface, connect to the Cheetah acquisition computer, and start recording data.

Wireless Distance	10 meters
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
Noise	< 2.5 µV RMS (input referred)
Power Source	quick-change battery or power tether
Motion Tracking	dual 9-axis accelerometer



Surprisingly Small & Light for Rat Models

At 30 x 35 x 30 millimeters, 11.5 grams, the FreeLynx is very powerful for its size.

- With small battery and 64-channel AFE: 21.3 grams
- · Halo Microdrives low-profile for reduced head torque
- · Backpack options to further reduce on-head weight

"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

Exceptional Telemetry for Larger Animal Models

FreeLynx is a great choice for reliable, high-density, high fidelity acquisition using larger animal models.

- · Strong wireless transmission for large behavior arenas
- · Custom device enclosures to protect device and implant sites
- · Advanced neural probes for multi-targeting brain regions

"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

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

quotes-research@neuralynx.com / orders-research@neuralynx.com Ask about our **System Maintenance Plan.**

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FreeLynx™

Quickly Adapt to Animal Interfaces

Using a separate, customizable front end connection interface, FreeLynx quickly adapts to your animal interface. With our custom low-voltage differential signaling (LVDS) tethers, FreeLynx is compatible with most major silicon probes, making FreeLynx ideal for non-standard animal models and complex behavior studies. This solution also enables varying channel counts, multiple implant sites, and flexible mounting options.

Example Front End Configurations

- QuickClip® AFE snaps to Halo Microdrive (tetrodes)
- QuickClip® AFE to Dual 36-pin Omnetics Adapter for 32 / 64 Channel Probes
- LVDS Bridge Board to Implantable Headstage (Mini-Amp-64)
- · LVDS Bridge Board to Silicon Probes
- LVDS Bridge Board to multiple QuickClip® AFEs



HPP for real-time processing of FreeLynx data, combined wired + wireless.

3. On-board MicroSD Card / Data Logger



QuickClip is a registered trademark of Neuralynx, Inc. Patent # US 9,325,107 B2

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Comprehensive Accessories

FreeLynx batteries are rechargeable and may be quickly swapped.

Small: 240 mAh, 6.8g, ≈ 0.5 hours **Medium**: 650 mAh, 15g, ≈ 1.5 hours **Large**: 1300 mAh, 30g, ≈ 3 hours



Custom battery options available for longer experiments. Power Tether for continuous recording without battery.



FreeLynx Shield: 3 grams

Recommended for protection and optimal battery life.

QuickClip® EIB: 1.5 grams

Magnetically aligning. Mounts to Halo-18. Tabs to secure FreeLynx.



- Remote On/Off Receiver and Transmitter
- *Power Stick*: on/off by magnetic control switch
- Omni-directional LEDs for head tracking
- Training Weight simulates mass/size/balance

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