



NeuroNexus Launches Fully Integrated Research Framework for Electrophysiology Data Capture, Management and Analysis

- The new plug-and-play solution includes novel high-density microelectrode arrays, state-of-the-art acquisition hardware and AI-driven analytics software –*
- Precision engineered hardware supported by cloud-enabled platform enables researchers to efficiently and cost-effectively collect and visualize data, manage experimental designs and collaborate worldwide –*

Ann Arbor, Michigan – February 2, 2022 – NeuroNexus, a pioneering neurotechnology company, today announced the launch of an innovative framework with fully integrated electrophysiology tools in an inexpensive, ready-to-go package for streamlined, cloud-enabled data collection, and foundational and applied science experiment management. Known as the NeuroNexus Summa Framework, the solution was designed for both experienced electrophysiologists as well as life science researchers who are looking to easily incorporate electrical signal read-outs from biological cells and tissues into their research workflow.

“Our vision at NeuroNexus is to transform electrophysiology and take life science research to the next level with this new pioneering framework, which addresses everything from the neural interface to the user interface,” said Dr. Daryl Kipke, CEO of NeuroNexus. “Our integrated solution is poised to become the new gold standard in electrophysiology and enable researchers to devote more time to their science and solve the persistent challenge they face in data capture and management.”

A seamless electrophysiology workflow

Today, most labs build DIY electrophysiology solutions from disparate technologies that often lack the ability to integrate with each other into a single, standardized workflow and are time consuming to manage. By integrating each phase of the workflow — from data streaming, collection and monitoring through data analysis and publication — scientists can now focus on their research rather than building and managing an electrophysiology technology stack. To offer researchers an automated and efficient electrophysiology workflow that facilitates sharing of data, the NeuroNexus Summa Framework comprises three integrated tools:

- [Activus™ Active Probes](#) which offer nearly infinite design space and access to [SiNAPS](#) probes with 1024 channels, the highest number and highest quality of simultaneously recorded channels currently available.
- [SmartBox Pro™ Data Acquisition Hardware](#) enables high-channel count experiments in a cost-effective, off-the-shelf solution that can be used with active as well as more traditional passive microelectrode arrays.

- [Radiens™ Analytics Software Suite](#) is a new, state-of-the-art software suite that supports the entire electrophysiology workflow from data acquisition and control to advanced analytics. *Radiens™ Analytics* currently includes three applications:
 - *Radiens™ Allego* controls data acquisition and affords online data validation with real-time quality metrics and 3D functional interface visualization.
 - *Radiens™ Curate* is a user-programmable interface for data file management, file conversion and batch processing of large data sets.
 - *Radiens™ Videre* presents a file-based “digital” twin of the 3D functional interface for users to visualize and analyze many existing electrophysiology data file types.

“The new approach of this integrated framework will enable experienced electrophysiology labs to easily conduct large neuronal recordings and perform rapid analyses of these complex experiments. Additionally, thanks to the standardized approaches to the acquisition and analysis of data, this framework will also provide an exciting opportunity for those labs new to electrophysiology to start implementing their own experiments independently and reliably,” said Dr. Jorge Brotons-Mas, Professor at Universidad Cardenal Herrera-CEU (UCHCEU) Faculty of Biomedicine.

Enabling advances in neuroscience

Advances in electrophysiological methodologies are paving the way for the development of new diagnostic tools and therapies. By standardizing the electrophysiological research framework, NeuroNexus aims to improve the reproducibility of study data in both academia and industry and facilitate more collaborations focused on the discovery and validation of disease signatures for neurological, psychiatric, and cardiac diseases.

“With their new offerings, NeuroNexus has established a framework to start addressing the very important, yet difficult and complex problem of standardizing the identification of electrophysiological signatures and biomarkers of neurological disease,” said Dr. Gyorgy Buzsaki, Biggs Professor of Neuroscience at New York University. “More impressively, the technology will enable researchers across the globe to collaborate and pool their results in a manner that ensures data integrity and reproducibility.”

“Electrophysiology offers researchers a unique view into the activity of cells and tissues and we believe that the NeuroNexus Summa Framework provides our biopharma and diagnostic partners an exciting new solution that delivers the standardization and collaboration tools that are necessary to drive diagnostic and therapeutic innovations that enable more personalized care to people living with a number of challenging diseases,” said Dr. Rio Vetter, Chief Operating Officer and Chief Technology Officer of NeuroNexus.

For more information about the framework, please visit neuronexus.com.

About NeuroNexus, Inc.

NeuroNexus is a pioneering neurotechnology company providing life science researchers with confidence in their data from the neural interface to the user interface and beyond. Our team of neuroscientists and neuroengineers have a collective 300+ years of electrophysiology lab experience and constantly innovate to take neuroscience to the next level. Learn more at neuronexus.com and follow us on [Twitter](#) and [LinkedIn](#).