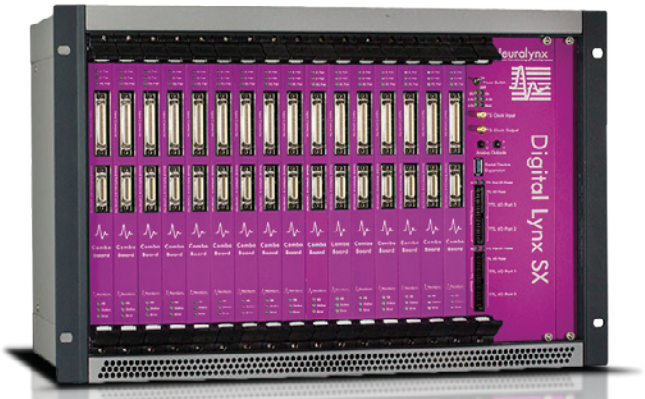
NeuraLynx

advanced electrophysiology solutions
for data acquisition & experiment control

Data Acquisition: Digital Lynx SX

high-density electrophysiology system designed for "no compromise" signal quality

The **Digital Lynx SX** is our high performance, DC coupled, wide-band acquisition and experiment control system. Designed for either stationary or cart-mounted lab installations, the Digital Lynx SX is available with either 4 or 16 slots (**4SX** or **16SX**) for population of 0 to 16 **Digital Lynx Combo Boards** per chassis. Each Combo Board performs both analog-to-digital signal conversion and digitally controlled reference selection, digitizing up to 32 neural recording channels with 8 selectable and 8 global references.



Digital Lynx 16SX / 512 Channels

- High density: up to 512 channels per system
- 40 kHz sample rate
- 24 bit A/D converter resolution
- Wide dynamic input range: ± 132 mV
- Full bandwidth: DC to 8 kHz
- Low noise: 1.3 µV or less
- Common Mode Rejection ratio exceeds 105 dB at 60 Hz
- Flexible referencing options: 8 references per 32 channel board, 8 global references

The **SX-M** chassis option enables low-cost entry into high-performance acquisition by adding capability to record up to 128 channels from digital multiplexing headstages. This option adds 2 µDB25 input connectors to record from **HS-16-mux**, **HS-32-mux**, **HS-64-mux**, and other digital multiplexing headstages.

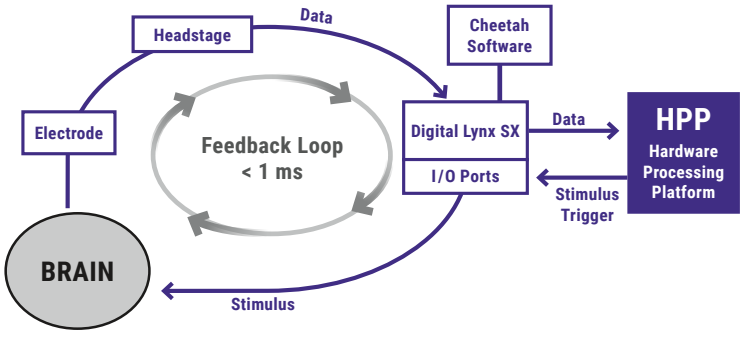
The Digital Lynx SX facilitates additional configurations via mezzanine board expansion and high speed serial ports. Connection to Cheetah Workstation(s) is made via 2 ethernet over fiber connections for data analysis and experiment control.

Now Included: HPP (Hardware Processing Platform)

The **Hardware Processing Platform (HPP)** is a low-latency internal FPGA that connects directly to the Digital Lynx SX motherboard providing low-latency data analysis and response. With HPP, researchers can analyze and respond to input signals in **less than 1 millisecond**, enabling real-time, closed loop neuroscience research.

Example applications

- Spike detection & classification
- Neural ensemble detection and burst analysis
- Low frequency narrow band signal response
- Digital signal filtering and other DSP functions
- Analog signal & precision TTL pulse train output



Process data from all Digital Lynx SX inputs, including buffered headstages, digital multiplexing (MUX) headstages, TTL ports, and FreeLynx® wireless digital telemetry headstages.

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Ask about our **System Maintenance Plan.**

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