NeuroNexus
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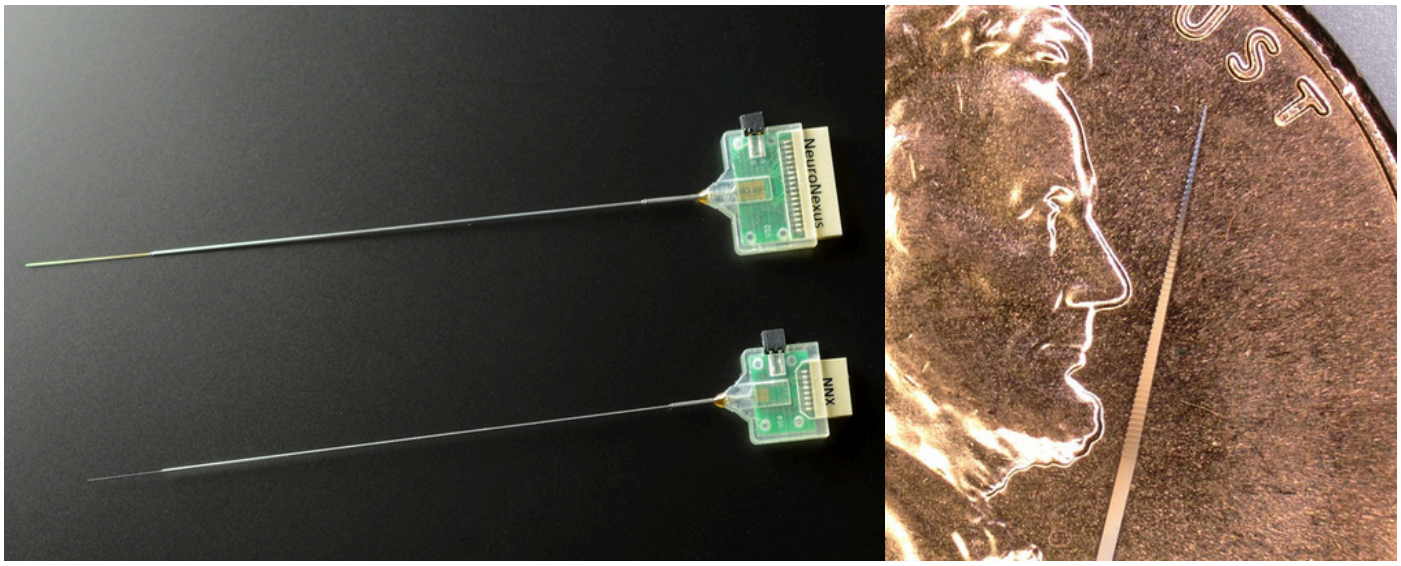
Vector Array™ Gen2



Vector Array™ - High-Density Precision for Deep Brain Research

The Vector Array™ delivers unmatched performance for deep brain recording and stimulation. Built with NeuroNexus' proven technology, Vector Arrays are optimized for high-density data collection in hard-to-reach structures - **now stronger, higher-capacity, and more versatile than ever.**

What's New

- **Reinforced Design** – Now available with added structural reinforcement to provide extra protection against breakage and improved longevity.
- **Fusion-Style Double-Sided Recording** - Twice the active sites in nearly the same footprint, enhancing spatial coverage and data richness with every insertion.
- **Expanded Channel Count** – Record and/or stimulate from up to 128 channels in acute or chronic experiments while maintaining the same precise electrode geometry and contact density trusted across NeuroNexus arrays.

Why choose Vector™

- **Reach Deep Targets** – Available in implantable lengths up to 110 mm, enabling access to deep brain structures in large animal models.
- **Durable and Reusable** - With proper care, a single Vector Array can be used in 50+ successful experiments, delivering exceptional reliability and performance across multiple uses.
- **Optogenetics Compatible** - Mount an optical fiber for seamless optogenetic stimulation integration.
- **Flexible Configurations** - Choose from laminar or polytrode layouts, or design your own custom Vector Array to meet specific research needs.
- **Robust Hybrid Assembly** - Combines a high-resolution silicon electrode array with a rigid stainless-steel support body, balancing strength, precision, and minimal tissue disruption.

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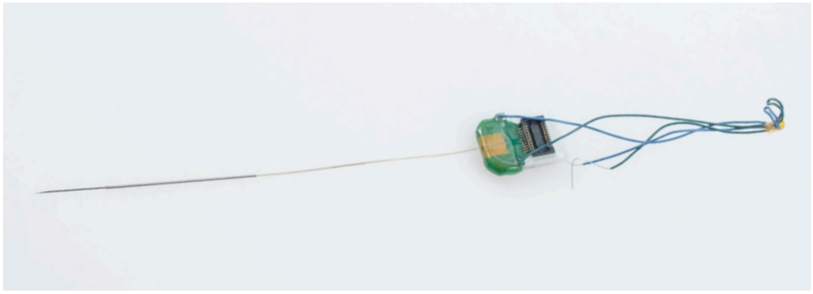
Chronic Vector Array™



The **Chronic Vector Array™** is a design enabling access to deep brain structures (> 10 mm deep) for chronic applications.

Chronic Vector Arrays™ can be configured with implantable lengths from 30 - 55 mm. Please factor in implantation hard- ware (clamps, etc.) when configuring your probe.

Opto Vector Array™

FLAT FIBER OPTIONS (ID / OD / NA)

50 µm/62.5 µm, 0.22 NA (etched)
105 µm/125 µm, 0.22 NA (standard)
200 µm/220 µm, 0.22 NA
200 µm/225 µm, 0.39 NA
400 µm/425 µm, 0.39 NA
50 µm/62.5 µm, 0.66 NA
105 µm/125 µm, 0.66 NA
200 µm/220 µm, 0.66 NA

Specifications

Channel count	16, 32, 64, 128
Total Length	70 mm or 110 mm
Silicon Electrode Length	10 mm
Silicon Electrode Width	20 µm min (Edge design), 75 µm min (Poly2 design), 175 µm max
Silicon Electrode Thickness	50 µm(standard), 100 µm (Fusion), 150/200 µm (reinforced)
Site Area	177 µm²
Site Coverage	375 µm - 6300 µm, depending on design
Electrode Site Material	Iridium (SIROF available)
Support Body Diameter	315 µm OD (16-channels), 400 µm OD (32-and 64-channels), 635 µm (128 channels)
Available Packages	V16, V32, V64, VC16, VC32, VC64, VZ16, VZ32, VZC16, VZC32, OV16, OV32, FV128

Chambers and Drives

Various chambers and drives are available for the Vector Array, including the **NaN** and **Narishige** drives.

Left: pDrive Chronic Primate Microdrive