# DoubleHelix♂

3DTRAX® Software

Analyze your 3D data with the familiarity of Fiji

3DTRAX enables easy, optimized capture and analysis of data and images for 3D SMLM, 4D particle tracking, extended depth whole cell, and extended depth object imaging.

More than just an image analysis tool, 3DTRAX is integrated with the Double Helix Optics SPINDLE® family of modules and library of e-PSF phase masks to deliver unprecedented depth and precision for imaging and tracking.

- Use your existing microscope software to capture raw images

- Render 3D datasets for a deeper look into your sample

- Easily set parameters to match specifics of your experiment

Double Helix

Extended Depth

Long Range

Multicolor
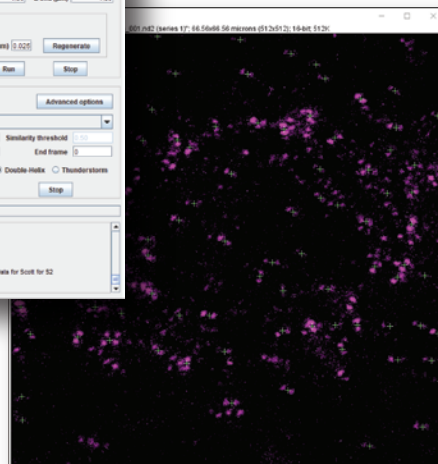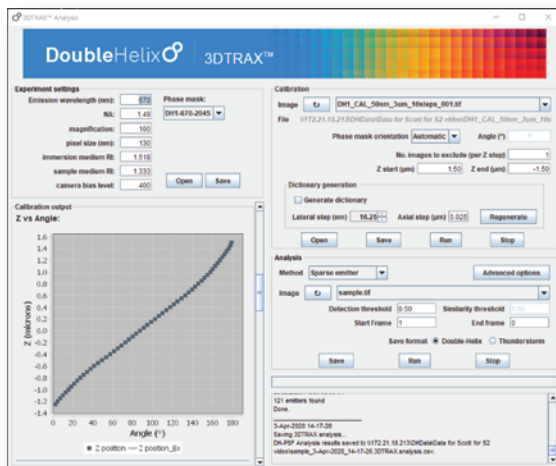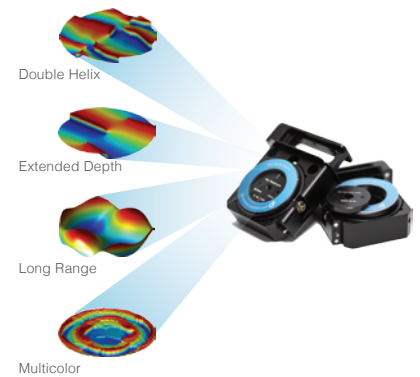
Deploy 3DTRAX as an easy-to-use Fiji plug in.

Integrate 3DTRAX into your workflow or OEM instrument with libraries available on Windows, MacOS, and Linux.

Multi-modal and adaptable

3DTRAX offers multiple 3D imaging restoration, analysis, and data capture modules. Select the software modules that match to your use of the SPINDLE or SPINDLE².

3D Single Molecule Localization Microscopy

Work with all variations of SMLM (STORM, PALM etc.). Choose algorithms for sparse and overlapping emitter samples. Calculates z position of each particle. Automates 3D localization to capture 3D image data and render 3D images with unprecedented depth and precision (<20 nm).

4D Single Particle Tracking

Localize, track, and visualize particles in X, Y and Z at super-resolution scales of ~20 nm precision laterally and axially, over the full extended depth range of the e-PSF.

Extended Depth of Field Imaging

Image restoration for whole cell and volumetric object imaging—see deeper into the sample without Z-scanning.

Multi-channel Imaging

Register multiple channels imaged on a single camera with the SPINDLE² for multi-wavelength, or multi-modal imaging.

Additional modules include tools for:
- Drift correction
- Visualization
- Analysis
- Data export

Tracks overlaid on movie show particle progression through time

Visualize data or render with 3D detail

About Double Helix Optics

Double Helix Optics enables visualization and data capture of objects at an unmatched depth and precision quality. Its engineered point spread function-based technology is advancing the field of 3D imaging, allowing for new discoveries in research and new capabilities of promise to a range of applications. The SPINDLE®, SPINDLE², engineered phase masks, and 3DTRAX® software are currently in use by globally recognized scientists. **Discover in 3D @ doublehelixoptics.com**.

DoubleHelix
Discover in 3D™

Double Helix Optics, Inc.
3415 Colorado Avenue
Boulder, CO 80303
imaging@doublehelixoptics.com
www.doublehelixoptics.com