

DoubleHelix[®]

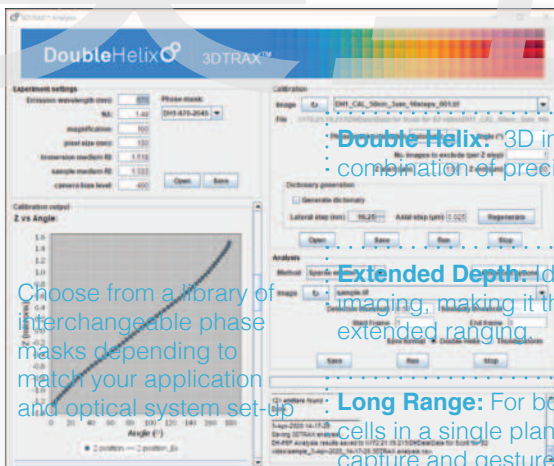
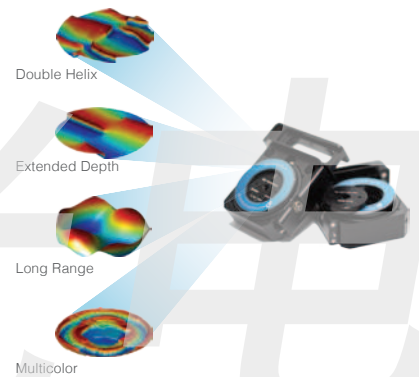
3DTRAX™ Software

Capture your 3D data in detail combined 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: 3D imaging with unprecedented combination of precision and depth of field.

Extended Depth: Ideal for extended focal depth imaging, making it the most suitable mask for extended ranging.

Long Range: For both extended 3D tracking of whole cells in a single plane. For machine vision 3D object capture and gesture recognition.

Multicolor: Simultaneous multi-wavelength tracking and super-resolution imaging in a single optical path.

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. Automate calibration and 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 images from a single camera with the SPINDLE² for multi-wavelength, or multi-modal imaging.

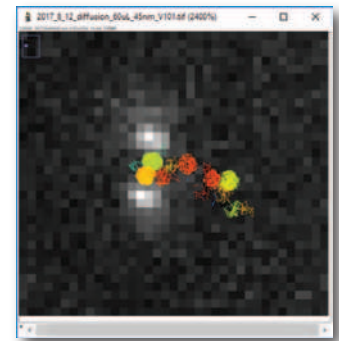
No coding necessary with the ImageJ plug-in,

All modules include tools for:

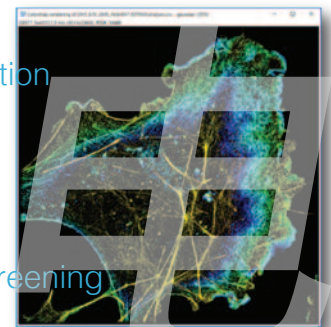
- Drift correction
- Visualization
- Analysis
- Data export



SPINDLE²



Tracks overlaid on movie show particle progression through time



Visualize data or render with 3D detail

- Industrial Inspection
- Biotech
- Life Sciences
- High Content Screening
- Machine Vision
- Gesture Recognition

About Double Helix Optics

Double Helix Optics enables visualization and data capture of objects at an unmatched depth and precision quality. Its Light Engineering™ 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™

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