



NeuroLucida® 360 software

Release Notes

Version 2020.3.1 (October 1, 2020)

NEW FEATURES AND ENHANCEMENTS

MBF Bioscience software has been rebuilt to maximize efficiency and speed in image and data handling. Load, display, and process your files faster than before due to intelligent image loading, concurrent usage of CPU cores, multiple levels of data caching, and efficient use of RAM and GPU resources.

You'll see improvements throughout NeuroLucida 360 software; highlights include:

- Images and data files load noticeably faster than in previous releases.
- NeuroLucida 360 software handles hundreds of thousands of data points simultaneously; you'll notice that it is more responsive than previous versions.
- Image adjustments are immediately displayed in both the 2D and 3D windows—without clicking any buttons.
- Multiple options to indicate how you want NeuroLucida 360 software to handle and display your images.
- Drag and drop file opening is easier and more powerful with the new Image Opener window.
 - Open all images in container files such as Leica .lif and Zeiss .czi formats.
 - Choose to display in a grid, stack images, or display on top of each other without stacking.
- Puncta detection in the 3D environment replaces synapse detection present in previous releases. The new tool includes the option to use powerful new machine learning technology for accurate puncta detection.
- Color channel selection in the 3D Environment via a new Channel panel enables you to select one or more color channels to view, hide, and associate data elements within your images.
- You can now associate traced structures with a specific color channel—With multicolor images, select a single color channel for display in either the Channel panel (3D), or the Image Adjustment panel (2D), to assign any structures traced while the selection is active to that specific color channel.
- New subvolume function in the 3D environment enables you to easily and systematically focus on portions of images/image stacks. This replaces the large volume reconstruction feature present in previous releases.
- Easier software authorization: NeuroLucida 360 software autofills the online Authorization Request Form with information about your computer system. Just fill in a few fields with information about you and your lab to submit the form.
- You can now classify segments of trees in tree-editing mode to facilitate later analysis using NeuroLucida Explorer software.
- Research Resource Identifier (RRID) recorded in every xml data file.
- Putative synapse markers work on all axon/dendrite pairs.

ISSUES RESOLVED

NeuroLucida 360 3D environment

- Fixed shell display of somas reconstructed in 2D

- Improved synchronization with the 2D environment
- Fixed varicosity detection issues with 'show current section only'

Neurolucida 360 overall

- Multiple image format display issues resolved
- Improved export functionality