NeoScan

- 3D Acquisition Add-On Using Microscope Video Port
- Fast Z-Stacking With Large Z range @ Nano Steps
- Vibration Less: No Objective Or Stage Move

Applications

Fluorescence and Brightfield Microscopy

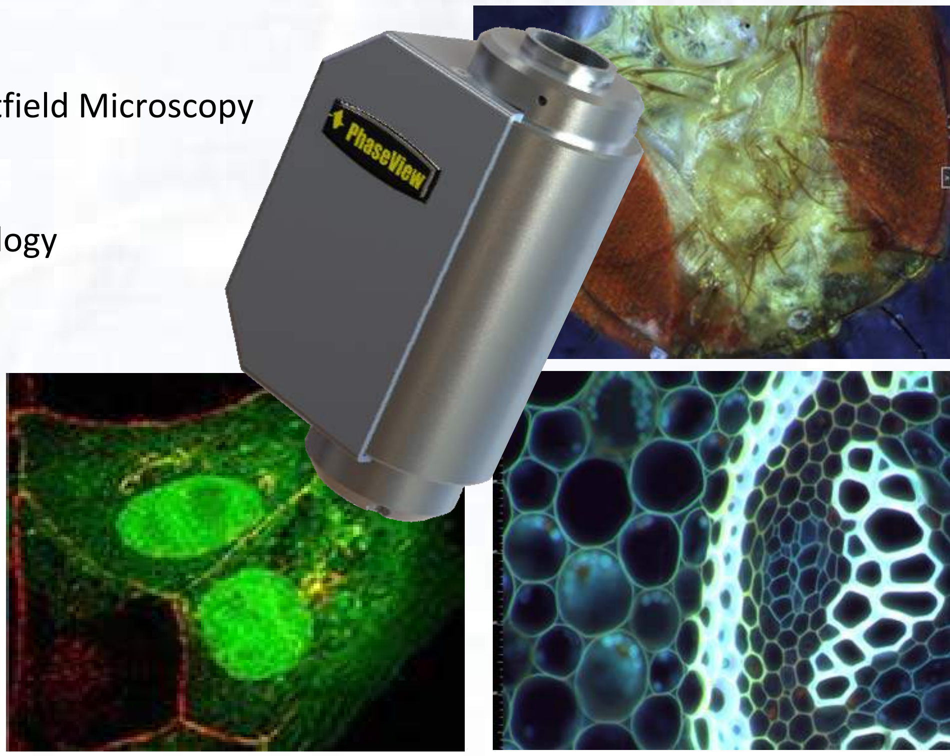
Biology

Cell Pathology & Toxicology

Electrophysiology

Drugs Testing

Forensic Sciences



Turn Your Microscope In A Powerful 3D Imaging Platform

Z-stacking MultiFocus 3D Time Lapse Deconvolution Volume Rendering

PhaseView®
THE SIMPLEST WAY TO 3D

NeoScan

Turn Your Microscope In A Powerful 3D Imaging Platform

NeoScan is based on an innovative method for scanning the depth of a sample. Instead of using motorized device for moving stage or objective, NeoScan integrates a seamless scanning optical device that fits between camera and video port. Any microscope equipped with a video port can now be turned in a powerful 3D imaging platform without need of additional accessories or microscope adaptation.

Compatible With Any Microscope No Adaptation Required

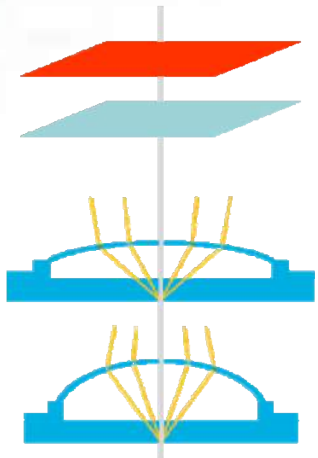
This newest method for 3D scanning allows fast Z-stacking with accurate Z steps over a large Z range. NeoScan can be used for remote focus control, Z-stacking, 3D volume rendering, deconvolution or 3D time lapse. NeoScan is an aberration free optical device that can be used for a wide range of microscopy applications including brighfield and fluorescence imaging.

Fast and Precise Z-Stacking For BrightField and Widefield Imaging

NeoScan allows 3D imaging while keeping sample space free; in addition the 3D acquisition can be achieved at any objective magnification and numerical aperture. As there is no moving part, the acquisition is vibration less without risk of sample perturbation or sample damages.

Free Sample Space and Vibration less 3D Imaging

Principle



Instead of using stepper motors or piezo devices for scanning the depth of a sample, PhaseView novel acquisition method relies on a digitally controlled tunable lens with suitable aperture for microscope use. The software controls the lens power thus enabling to select a particular image plane at any position along the Z axis in a similar way to microscope focus wheel.

The NeoScan optical device integrates precise aberration correction and is diffraction limited to ensure optimal imaging when used with top quality objectives, in addition NeoScan allows microscopy imaging from deep UV to NIR without transmission loss.

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Flexible 3D Acquisition With Life Sciences Cameras

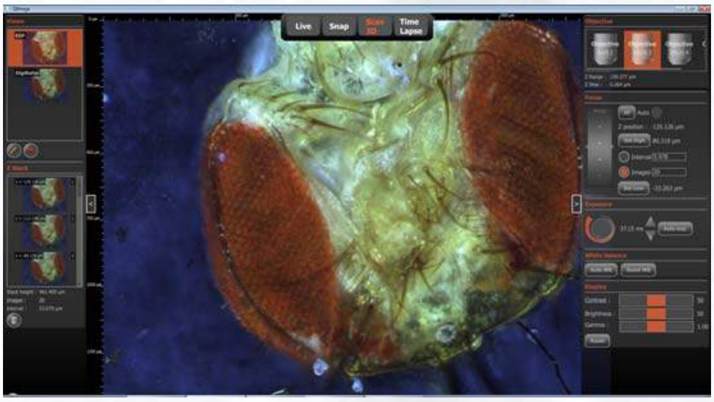
NeoScan is compatible with popular life sciences including scientific CMOS cameras with large format sensors enabling a wide range of imaging applications from brightfield to fluorescence imaging. NeoScan does not alter normal camera use, 2D and 3D imaging can be performed making your microscope a powerful imaging platform.

QtImage Digital Imaging Software Included

QtImage user interface touchscreen compatible lets you zoom, tap, drag and scroll right on screen only using your fingers.

QtImage provides all features to meet the most demanding needs in life sciences research and biotech industries including:

Z-stacking.Digital Refocusing.Time Lapse.
3D Volume. Deconvolution.Multi Focus Image



Microscopy Automation

Software Development Kit
The NeoScan SDK comprise a set of APIs written in C. The supported Operating Systems are Windows Vista, Windows 7, Windows 8.

NeoScan specifications

Camera compatibility (camera not included)	Format 1" or Less, C-mount (see compatibility list)
Microscope Interface	Video Port – Recommended 1X C-mount adapter
Scanning speed	Up to 24 images / second
PC Interface	USB 2.0
Power Supply	110 / 220 AC
Physical Dimensions (mm), Weight (g)	NeoScan Head: 135(H) 56(W) 80(D), 470 g Control Unit: 40(H) 160(W) 150(D) , 150 g

Objective Mag / NA	Z Range (µm)	Z Step(µm)
5X / 0.10	920	0.46
10X / 0.25	230	0.12
20X / 0.45	57.5	0.03
50X / 0.8	9.2	0.005

Z Range & Z-Step performance
Z range and Z step are objective dependant, see typical performance for standard objective magnification with 1X coupler.
For any other magnificatio, the following formulas can be applied:
Z Range = 23mm / $(G\_Obj)^2$
Z Step = Z Range / 2000
Z step accuracy = 1%
Z step repeatability = 0.3%

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