Nano-View™ Series

02.583.2511 פז"מ-טק (1991) בע"מ
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Features

- *Integrated micropositioning and nanopositioning*
- *1" (25mm) 2-axis micropositioning with encoders*
- *2-axis or 3-axis nanopositioning up to 300 µm*
- *Large aperture - fits 3 inch slides*
- *Retrofit to inverted microscopes*
- *picoQ™ sensor technology*
- *Closed loop control*

Typical Applications

- *Optical microscopy, easy to retrofit*
- *Confocal imaging*
- *Fluorescence imaging*
- *Single molecule spectroscopy*
- *Nanomanipulation*
- *STORM and PALM imaging*

Nano-View300-3 (2-axis (XY) micropositioning plus 3-axis (XYZ) nanopositioning) mounted on a Nikon inverted microscope.

Compatible Software Packages

LabVIEW

Examples, tutorial, and Nano-Route™ 3D supplied with Nano-Drive™ USB interfaces.

Image-Pro AMS

Analog motion control

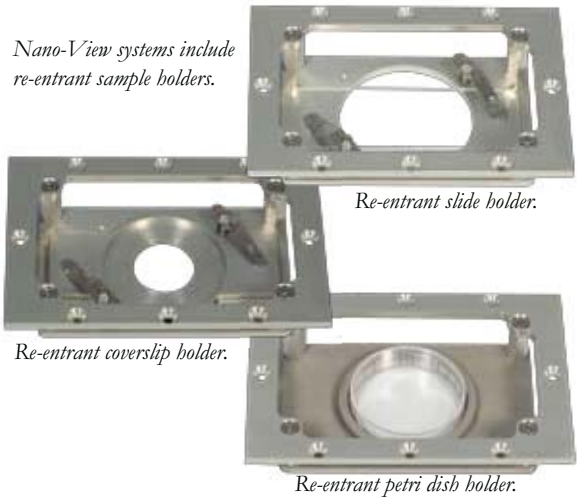
MetaMorph

USB and analog motion control

µManager
THE OPEN SOURCE MICROSCOPY SOFTWARE

USB motion control

Nano-View systems include re-entrant sample holders.



Re-entrant slide holder.

Re-entrant coverslip holder.

Re-entrant petri dish holder.

Product Description

The Nano-View™ is a fully integrated positioning system for use with inverted optical microscopes. The Nano-View™ combines a long range, motor driven, two axis, linear motion stage with an ultra-low profile, high resolution nanopositioning system. The micropositioning stage has integrated linear encoders and provides 25 mm of travel per axis with an encoder resolution of 20 nm (5 nm optional). The minimum step size is 95 nm with a step repeatability of 50 nm (25 nm steps with option 5NM). The nanopositioning systems built into the Nano-View™ have the lowest profile available and have ranges of motion extending up to 300 microns per axis (X,Y and Z). Internal position sensors utilizing proprietary picoQ™ technology provide absolute, repeatable position measurement with picometer accuracy under closed loop control. A Nano-View™ system includes the Nano-Drive™ controller and the Micro-Drive controller which connects to a PC using a standard USB computer interface. The MicroDrive is fully compatible with user written LabVIEW software and the system is provided with a basic LabVIEW motion control routine for positioning in XY. The Nano-View™ is the complete picometer scale positioning system for single molecule spectroscopy and high resolution microscopy applications.

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Technical Specifications

Nanopositioner

Axes of motion ..... XY or XYZ
Ranges of motion (XY or XYZ) ..... 100/200/300 µm
Resolution (100/200/300 µm) ..... 0.2/0.4/0.6 nm
Resonant Frequencies
X axis (100/200/300 µm) ..... 450/400/350 Hz ±20%
Y axis (100/200/300 µm) ..... 350/300/250 Hz ±20%
Z axis (100/200/300 µm) ..... 450/350/250 Hz ±20%
Stiffness ..... 1.0 N/µm
θ_{roll} , θ_{pitch} (typical) ..... ≤1 µrad
θ_{yaw} (typical) ..... ≤3 µrad
Recommended max. load (horizontal)* ..... 0.5 kg
Body Material ..... Al, Invar or Titanium
Controller ..... Nano-Drive™

* Larger load requirements should be discussed with our engineering staff.

Note: Additional information regarding the built-in nanopositioning systems can be found on the catalog pages which describe the Nano-LPS Series and the Nano-BioS Series.

Micro-Drive™ controller used to operate the micropositioning portion of the Nano-View™ system. A standard USB port allows direct connection of the Micro-Drive™ controller to a PC. The Nano-Drive™ controller (see Nano-Drive™ section of catalog) operates the nanopositioning portion of the Nano-View™ system. Both controllers are LabVIEW compatible.

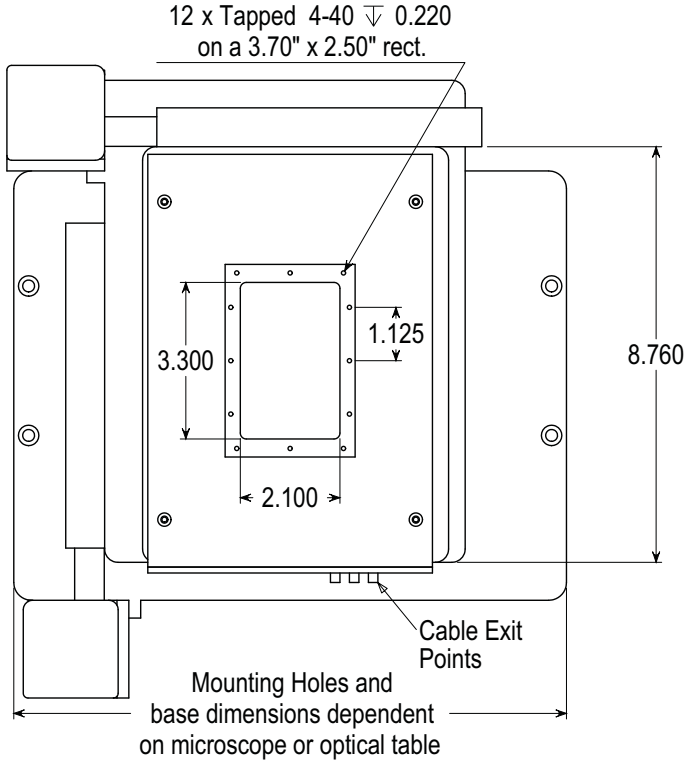
Micropositioner

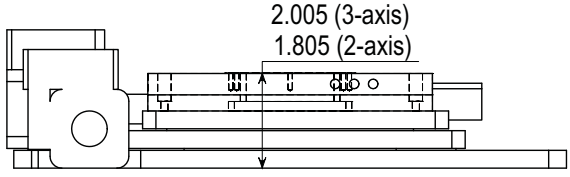
Axes of motion ..... XY
Range of motion (XY) 25mm
Step size ..... 95 nm (25 nm with option 5NM)
Step repeatability ..... 50 nm
Encoder resolution ..... 20 nm (5 nm with option 5NM)
Body Material ..... Aluminum
Controller ..... Micro-Drive™

Options

5NM

Linear encoder and motor controller upgrade. Improved encoder resolution to 5 nm (20 nm is standard). Step size is reduced to 25 nm (95 nm is standard).





Note: All Dimensions in Inches