

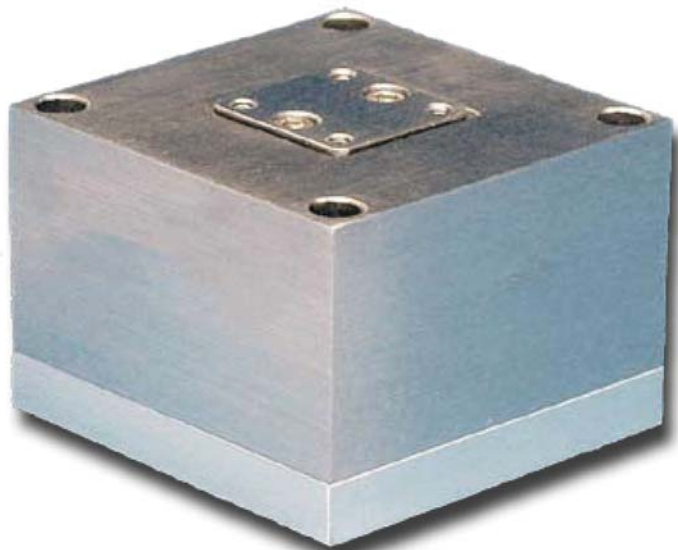
Features

- ▶ Single axis (Z) motion
- ▶ Step response less than 1 millisecond
- ▶ Scans up to 500 Hz
- ▶ Closed loop control
- ▶ Combine with Nano-OP Series for multi-axis configurations
- ▶ **pico**™ sensor technology

Typical Applications

- ▶ High speed, high resolution positioning
- ▶ Metrology
- ▶ Interferometry

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Nano-HSZ constructed from aluminum.

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Product Description

The Nano-HSZ is a high speed single axis (Z-axis) precision nanopositioning system. Internal position sensors utilizing proprietary **pico**™ technology provide absolute, repeatable position measurement with picometer accuracy under closed loop control. The Nano-HSZ offers a compact footprint, ultra low noise characteristics, and a reso-

nant frequency greater than 7 kHz. These characteristics make it ideal for applications that require noise floors less than 10 picometers and/or high speed performance. With the step response time of the Nano-HSZ set to less than 1 millisecond for extremely high speed applications, scan frequencies up to 500Hz can be achieved.

LabVIEW Compatible USB Interfaces



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



Nano-HSZ (shown actual size) combined with two Nano-OP Series stages for high speed, high resolution, 3-axis motion (XYZ).

The 3-axis Nano-HS3 (pages 22-23) provides similar high speed, high resolution performance in an integrated package.

Technical Specifications

Range of motion (Z)	10 μm
Resolution	0.01 nm
Resonant Frequency	7.5 kHz \pm 20%
Scanning Speed	up to 500 Hz
Stiffness	12 N/ μm
Recommended max. load (horizontal)*	0.1 kg
Recommended max. load (vertical)*	0.1 kg
Body Material	Al, Invar or Titanium
Controller	Nano-Drive™

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

Ultra Low Position Noise

