



Welcome to New Scale News, your monthly update on micro-mechatronic systems and applications. This month we feature our latest rotary system - a miniature mirror positioning system for point-to-point beam steering.

Please [email us](#) or [comment on LinkedIn](#) to let us know what you think!



Miniature single-axis mirror positioning system boasts smallest size, easiest operation

Miniature piezoelectric smart stage with built-in controller enables simple, precise point-to-point beam steering

We're pleased to announce the latest developer's kit in our M3 micro-mechatronic product line. The **DK-M3-RS-U-1M-20** is a complete piezoelectric mirror positioning system with a familiar galvo-scanner form factor, but a drastically smaller size: only 12 mm diameter *including the embedded closed-loop controller*.

The smart stage rotates the pre-mounted aluminum-coated mirror +/- 20 degrees at up to 1100 degrees/second with accuracy of 0.25 degrees for precise, point-to-point positioning or dynamic scanning up to 100 Hz. With only 3.3 VDC input it is suited for handheld and portable instruments.

Applications include medical lasers and imaging systems, industrial measurement and spectroscopy instruments, and laser printing and engraving.

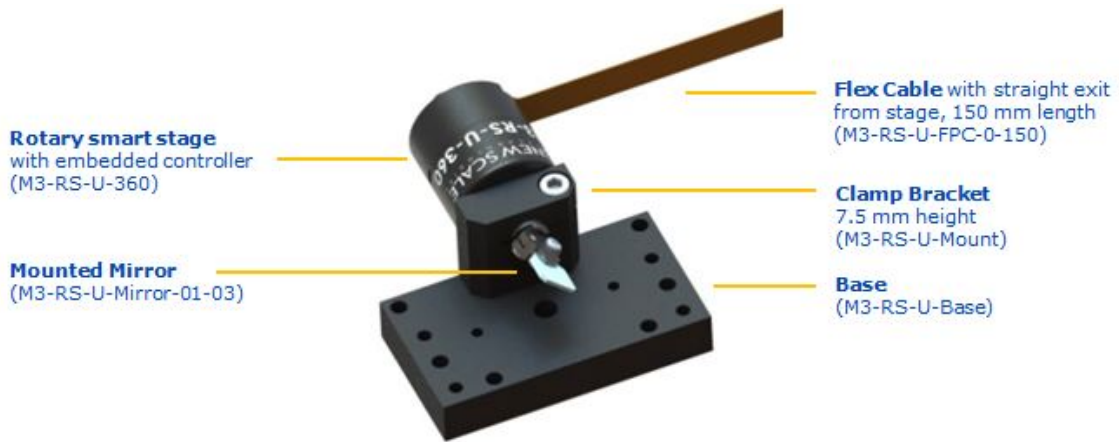
Patented piezoelectric motors along with position sensors, bearings, drive electronics and embedded firmware are all integrated into the miniature rotary stage. Along with smallest system size, this makes for fast, easy integration into OEM systems. The positioner accepts direct input of high-level digital motion commands from a system processor via I2C, SPI, UART or analog servo interface.

DK-M3-RS-U-1M-20 Specifications

- Smart stage size: 12 mm diameter
- Beam size: up to 2 mm diameter
- Range of motion: +/- 20 degrees
- Speed: up to 1100 deg/sec
- Absolute encoder resolution: 0.025 degrees
- Accuracy: 0.25 degrees
- ***More specifications***

Developer's Kit price and availability

The DK-M3-RS-U-1M-20 Mirror Positioning Developer's Kit includes a rotary smart stage, mounted mirror, bracket and base, breakout board, cables, USB adapter and software for system evaluation and development. Developer's Kits are available from New Scale Technologies at \$1,850 with delivery from stock to 4 weeks.



Components are also sold separately with volume pricing available. For 1,000 pieces, the rotary smart stage is \$975 each and the standard mirror is \$85. Call us at +1 (585) 924-4450 or NSTsales@newscaletech.com for additional volume pricing information.

Optifab in Rochester Oct. 12-15

If you'll be travelling to Rochester for Optifab please let us know! We'd love to arrange a meeting at the show, or here at our offices.

SPIE.OPTIFAB

Rochester will be home to the new Integrated Photonics Center


The Department of Defense this summer picked Rochester as the location for the new Manufacturing Innovation Institute for Integrated Photonics. [Read more.](#)

About Us

New Scale Technologies develops small, precise and smart motion systems for critical adjustments of optics, and many other micro positioning applications. Our simple and elegant solutions deliver best-in-class performance in handheld, portable and mobile instruments for medical, scientific and industrial applications. Our customers benefit from complete, "all-in-one" motion solutions that are tailored to their unique requirements and easily integrated into their next-generation instruments. [Contact us.](#)



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