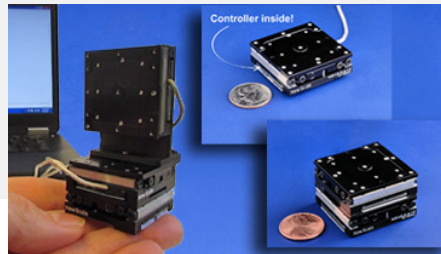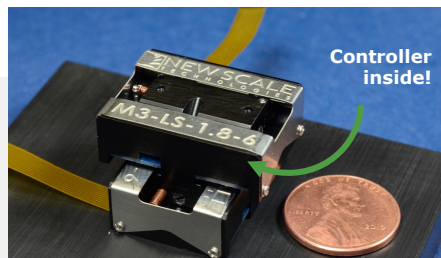# New Scale Technologies

Accelerate Photonics Instrument Design with Embedded Motion

New Scale brings you the smallest, most precise closed-loop positioning solutions available. M3 Smart Modules with **built-in controllers** are easy to integrate into handheld and portable instruments. Create *smaller, smarter* imaging systems, scientific instruments, medical devices, and more. Get your product to market faster with the lowest total cost.
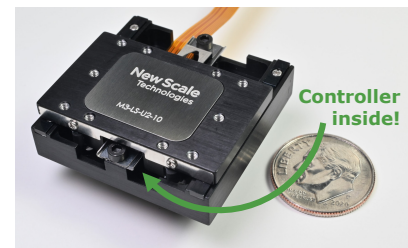
Linear Smart Stages & Multi-Axis Systems

Controller inside!

Rotary Smart Stages & Multi-Axis Systems

Controller inside!

Controller inside!

M3-LS Linear and **M3-RS Rotary Stages** can be assembled into multi-axis motion systems. With a controller embedded in each stage, these systems eliminate the need for bulky external control boards. They deliver the smallest system size and fastest integration for precision, closed loop motion in two or three axes.

Controller: Embedded in stage

Focus Modules
M3-F and **M3-FS Focus Modules** are designed to take up the same space as a lens mount, but integrate high-precision motorized focal or zoom for optics in tiny OEM cameras.

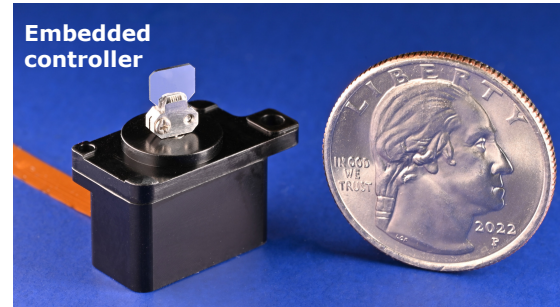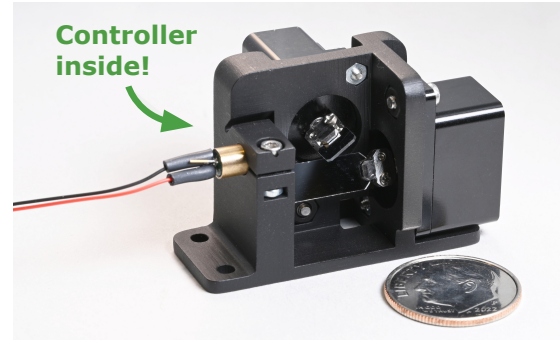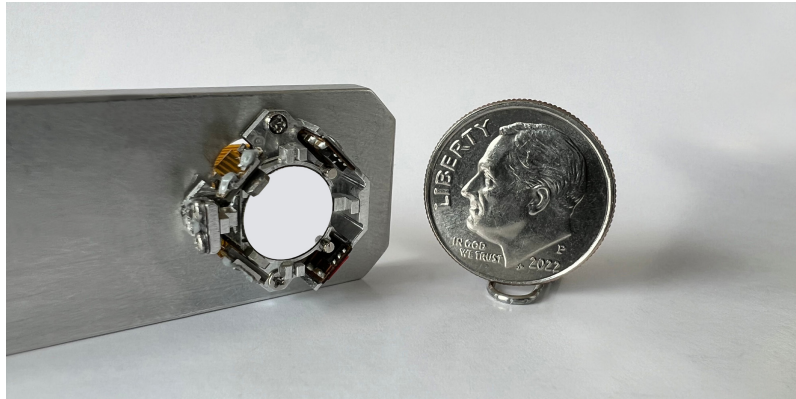**Controller: Embedded in focus module**

Embedded controller
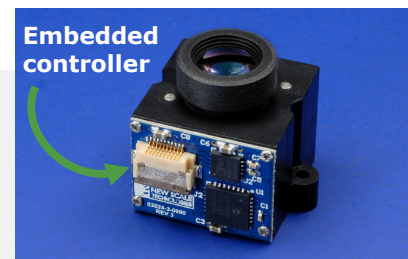
Controller inside!

Beam Steering Kits

M3-Beam Steering Systems provide high-precision point-to-point beam steering the smallest possible space.

Controller: Embedded in module

Controller inside!

Embedded controller

	Linear Stages			Linear Actuators	Linear Focus		Rotary Stages (Beam Steering)	
	M3-LS-3.4-15	M3-LS-U2-8	M3-LS-1.8-6	M3-L-1.8-6	M3-F-1.8-TRK-1.5-S	M3-FS-1.8-1.5-M16	M3-RS-U2-4.5-360	M3-TMM-U2-4.5-6 Preliminary
Embedded Controller	✓	✓	✓	✓	✓	✓	✓	✓
Max Payload	200 g	20 g	20 g	5 g	5 g	5 g	3 g	Glass mirror, 8 mm diameter. 0.5 mm thick
Closed-Loop Resolution	0.5 µm	0.5 µm	0.5 µm	0.5 µm	0.5 µm	0.5 µm	22 mdeg	10 mdeg
Absolute Encoding	✓	✓	✓	✗	✓	✓	✓	✓
Stroke	15 mm	8 mm	6 mm	6 mm	1.5 mm	1.5 mm	360 deg	+/- 8 deg, Both Theta X & Y axis
Force/Torque	1 N	0.1 N	0.2 N	0.2 N	0.2 N	0.2 N	0.04 N-mm	N/A
Input	6 VDC	5 VDC	3.3 VDC	3.3 VDC	3.3 VDC	3.3 VDC	3.3 VDC	3.3 VDC
Communication	I2C, SPI, USB adapter						I2C, SPI, UART, USB adapter	I2C, SPI, USB adapter
Speed	4 mm/s	35 mm/s	5 mm/s	5 mm/s	5 mm/s	5 mm/s	>1,100 deg/s	720 deg/sec
Size, including controller	32 x 32 x 11 mm	32 x 32 x 10 mm	29 x 20 x 9.5 mm	28 x 13.2 x 7.5 mm	20 x 23 x 16 mm	20 x 23 x 16 mm	11.75 x 21.9 x 16 mm	14 x 14 x 7 mm

Customize Your Motion System
Talk to our engineers about meeting your exact specifications.

585.924.4450
NSTsales@newscaletech.com

newscaletech.com

New Scale Technologies