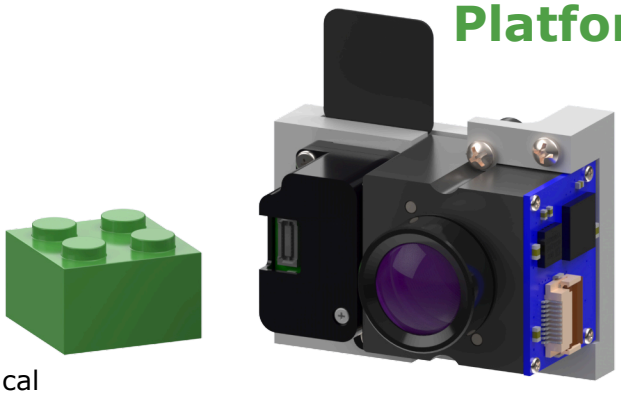
New Scale Technologies

SMART SHUTTER PLATFORM

ONE MOTION PLATFORM. UNLIMITED SOLUTIONS.

Focus & Shutter Platform



The M3-RS platform delivers fast, precise, and reliable optical control in a compact, low-power, fully integrated module.

FAST
70ms Shutter

ZERO POWER HOLD
No holding current

PRECISE
Closed-loop position control for optimal performance

QUIET
No solenoid kick
No bounce
No noise

INTEGRATED
3.3v operation with internal controller and drivers

SMART OPTICAL CONTROL

The NST Smart Shutter provides advanced capablities over standard actuators

- Programmable Optical States, not limited to open/closed positions
- Optical Sub-System, simplifed integration
- Software Defined Behaviour, soft close, adjustable speed & acceleration
- Multi-Function Capabilities

BUILT FOR SWaP

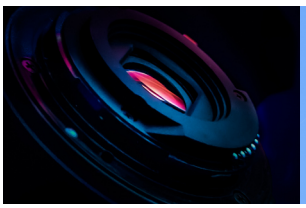
Small, Lightweight, Efficient, Reliable.

Designed for the **most** demanding missions.

Key Performance Metrics

Actuation Type	Rotary
Move Time (90°)	70 ms Typical
Position Accuracy	±0.25°
Repeatability	±0.05°
Input Voltage	3.3V
Operating Power	750 mW
Holding Power	0 mW
Interface	SPI/ I2C / UART
Mass	5 g
Dimensions	21.9 x 11.75 x 16 mm

EO/IR CAMERAS

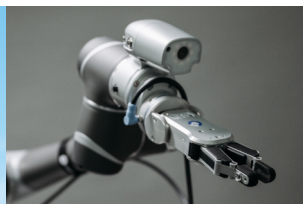


DEFENSE SYSTEMS

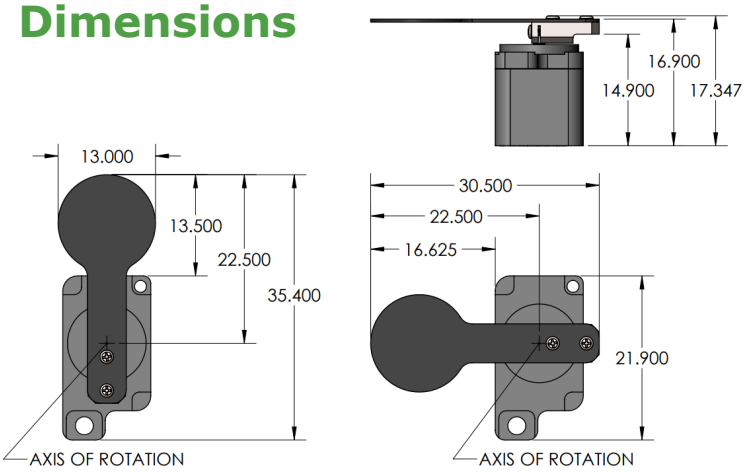
MEDICAL & SCIENTIFIC INSTUMENTS

UAV/UGV PAYLOADS

INDUSTRIAL INSPECTION

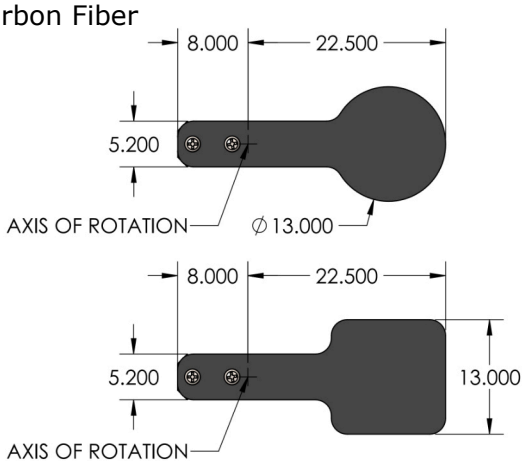


Smart Shutter Dimensions



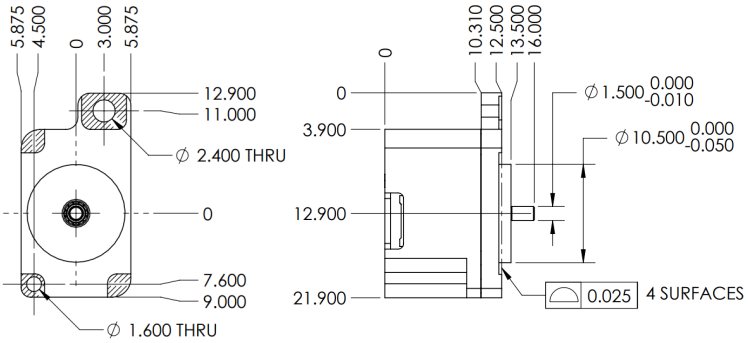
Blade Options

- Matte Black Annodized Aluminum
- Carbon Fiber

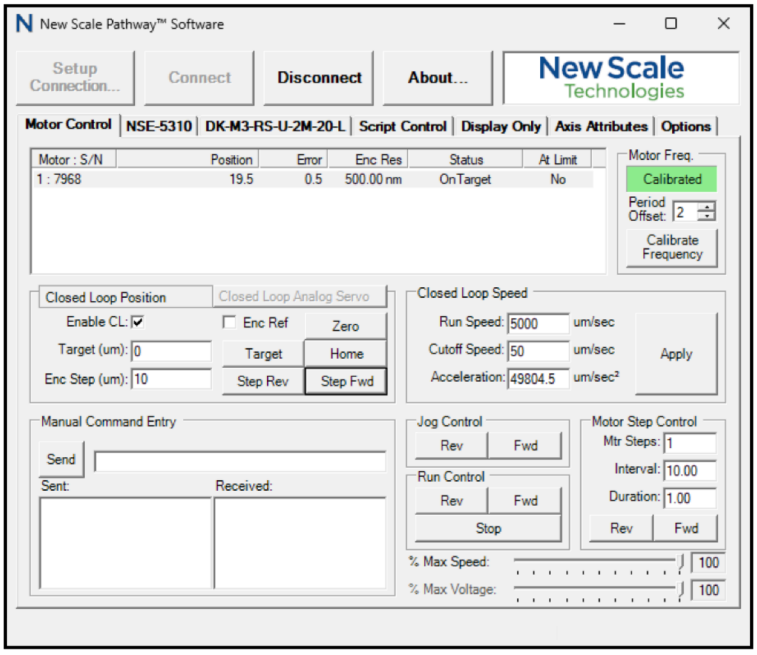


Smart Shutter Platform

Rotation Range	360° Continuous Rotation
Speed	> 1,100°/s
Acceleration	> 1,000,000°/s
Stall Torque (min)	0.04 N-mm
Holding Torque (max)	0.08 N-mm (no power)
Stage Mass	5 g
Payload	
Mass	3 g
Inertia	350 g-mm2
Closed Loop Performance	
Step Frequency	100 Hz
Resolution	22 mdeg (14 bit)
Repeatability	± 0.05°
Accuracy	0.25°
Step & Settle Times	
0.5°	16 ms
5°	22 ms
20°	31 ms
Electrical & Control	
Input Voltage	3.3VDC
Power	750 mw moving 0 mw stationary
Communication Interface	I2C, SPI, UART
Contoller	Integrated 64 MIPS controller



NST Pathway™ Application

The included Pathway software provides access to stage settings, scripted motion commands, diagnostics, and more with an easy to use graphical interface.

ASCII commands can be sent directly to stages using the Manual Command Entry or you can create your own code using the intuitive scripting tool.