

Rapid Automated Modular Microscope (RAMM)



RAMM Features

- Automated high-speed XY stages, precision piezo and motorized Z focusing, and a wide range of scanning options
- Configurable with infinity-corrected optics, dichroic filter cubes, multi-wavelength excitation and emission filter wheels, shutters, and detectors including cameras and photomultipliers
- Autofocus, focus stabilization, and tracker available
- Arrangement provides a solid platform for high throughput screening, genetic sequencing, experimental research among others implementations
- Designed for flexible OEM development using high quality high MTBF components to reduce cost and increase customer satisfaction

Lead Screw Options

Lead Screw Pitch Options	Rotary Encoder Resolution	Maximum Speed
25.40 mm (Ultra-coarse)	88 nm	28 mm/sec
12.70 mm (Super-coarse)	44 nm	14 mm/sec
6.35 mm (Standard)	22 nm	7 mm/sec
1.57 mm (Fine)	5.5 nm	1.75 mm/sec

Optional Linear Encoders: = 10 nm Resolution, Accuracy = $\pm 3 \mu\text{m}$ per length of scale of 120 mm

Specifications for Standard Configuration

XY stage range of travel	120 mm x 75 mm
Linear translation range of travel	At least 50 mm
Resolution (rotary encoder step)*	0.022 μm
RMS repeatability*	< 0.7 μm
Maximum velocity*	7 mm/sec

*Shown with 6.35 mm pitch Lead Screw *Shown with 6.35 mm pitch Lead Screw