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Microscope Translators (Page 1 of 2)

NEW
products

Thorlabs offers precision Microscope Translators to position a microscope about a stationary specimen. This method of positioning the FOV of the microscope enables viewing a large area of a sample without moving the specimen.

The Microscope Translators provide travel of the microscope in both the X and Y directions while maintaining a rigid, mechanically and thermally stable platform for the microscope. These Translators are constructed of solid stainless steel and consist of four LNR50 stages (one master and one slave for each axis) mounted on a baseplate and connected by a top plate for mounting the microscope. The array of counterbored holes in the baseplate allows the Translator to be secured to an imperial or metric tapped breadboard or optical table.

Manual Microscope Translator

The manual Microscope Translator (MT-FN1) can be easily configured in either a left- or right-handed XY orientation. The MT-FN1 manual Microscope Translator utilizes micrometer drives with a graduated scale to provide smooth translation and repeatable positioning, which enables the microscopist to return to a previously viewed location.

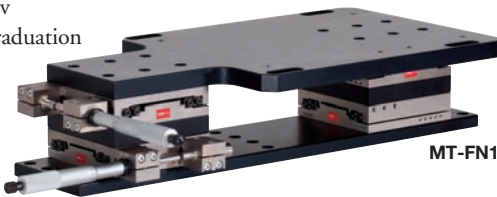
Features

- Manual, Motorized, and Motorized-Encoded Versions
- 2" (50 mm) XY Travel Range
- 110 lbs (50 kg) Capacity (XY Travel Platform)
- Rugged, Thermally-Stable Aluminum Mounting and Spacer Plates
- Heavy-Duty Cross-Roller Stainless-Steel Bearings

Thorlabs' standard Microscope Translators have a top plate that is specific to the Nikon Eclipse FN1 upright microscope. Please email ImagingSales@thorlabs.com to inquire about top plates that are compatible with other common upright microscopes.

MT-FN1 Specifications

- 2" (50 mm) XY Travel Range
- 50 $\mu\text{m}/\text{rev}$
- 10 $\mu\text{m}/\text{graduation}$



MT-FN1

ITEM #	\$	£	€	RMB	DESCRIPTION
MT-FN1	\$ 4,000.00	£ 2,880.00	€ 3,480.00	¥ 31,880.00	Manual Microscope Translator

Motorized Microscope Translator

The motorized version of the Microscope Translator (MTM-FN1) includes high-quality stepper-motor-based actuators (DRV014) to provide automated high-resolution XY positioning and repeatability. Each stepper-motor-based actuator utilizes a trapezoidal-shaped 1 mm/rev pitch leadscrew that provides high load carrying capability. Coupled with stepper motor controllers (two TST001 controllers included), the Motorized Microscope Translator provides smooth automated-controlled movement in increments of 0.05 $\mu\text{m}/\text{step}$.

SPECIFICATIONS	MTM-FN1
Travel Range	2" (50 mm)
Max Acceleration	0.5 mm/s ²
Max Velocity	1.0 mm/s
Max Load Capacity	110 lbs (50 kg)
Incremental Movement	0.05 μm (Min Achievable)
Percent Positional Accuracy	0.02% (Max)
Home Location Accuracy	$\pm 1.0 \mu\text{m}$
Drive	DRV014
Runout (Over Full Range)	$\pm 0.0004"$ ($\pm 10 \mu\text{m}$)
Leadscrew Pitch	1 mm
Limit Switches	Ceramic-Tipped Electro-Mechanical Switches
Included Controllers*	TST001
Controller Interface	USB
Absolute On-Axis Accuracy	10 μm
Bidirectional Repeatability	0.5 μm
Encoder	N/A
Encoder Resolution	N/A
Bearings	Crossed Roller

*Specifications for the TST001 Controllers can be found on pages 630 - 631

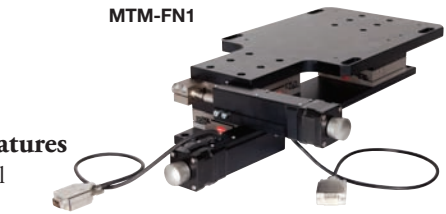
Controller Features

- Single Channel Controller
- High-Resolution Microstepping
- Compact Footprint
- USB Plug-and-Play PC-Controlled Operation
- Easy-to-Use Manual Controls with Velocity Slider and Jog Buttons
- Full Software Control Suite Supplied
- Extensive ActiveX[®] Programming Interfaces
- Software Integrated with Other apt[™] Family Controllers

The T-Cube[™] USB apt[™] Stepper Motor Controller (TST001) is a very compact, single-channel controller for easy manual and automated control of small, 2-phase, bipolar stepper motors.



TST001



MTM-FN1

USB connectivity provides easy plug-and-play PC controlled operation. Multiple units can be connected to a single PC via standard USB technology or by using the T-Cube[™] Controller Hub (TCH002) for multi-axis motion control applications (see page 620).

See Page 630 for More Details

ITEM #	\$	£	€	RMB	DESCRIPTION
MTM-FN1	\$ 7,000.00	£ 5,040.00	€ 6,090.00	¥ 55,790.00	Motorized Microscope Translator with Controllers