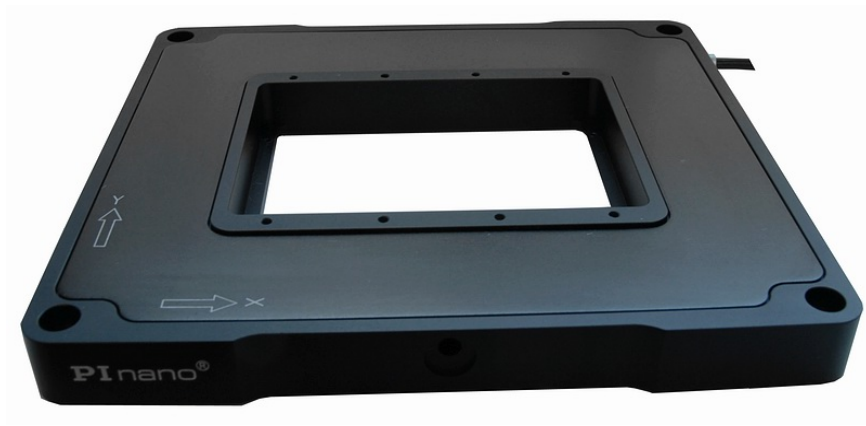


# PI nano<sup>®</sup> Piezo Microscope Stage & Controller

X, Y & XY, COST-EFFICIENT NANOPositionING SYSTEMS FOR SR MICROSCOPY



## P-546

- X, Y and XY configurations
- Choice of cost-effective piezoresistive sensors and high stability capacitive sensors
- 200 µm travel / axis
- Low profile for easy integration: 17 mm
- Clear aperture for 3 x 1" object slides, recessed sample holders
- Outstanding lifetime due to PICMA<sup>®</sup> piezo actuators
- Sub-nanometer resolution, ms-response times

### Precision-class positioning system w/ controller

Includes software & sophisticated closed-loop USB-controller for high repeatability & accuracy: mod. E-545 for XY stages, mod E-709 for single axis stages.

### PICMA<sup>®</sup> high-performance piezo drive

Frictionless, FEM-optimized flexure guiding system. High-dynamics with millisecond response times. Ceramic-insulated piezo actuators for outstanding lifetime & reliability even under high-humidity conditions.

### Choice of two high-resolution sensors

Piezoresistive for lower cost; capacitive direct metrology sensors for higher long-term stability and linearity.

### Easy implementation

Large clear aperture. For standard object slides (25 x 75 mm). Optional: object slide holder, further accessories. M-545 long-travel microscope stage mountable on most inverted microscopes.

### Fields of application

Super-resolution microscopy, 3D-SIM (structured illumination), confocal microscopy, biotechnology, screening.

### Accessories

M-545 Long-travel XY Microscope Stage, 25 x 25 mm, High Stability, Manual and Motorized Versions, Available for Olympus, Nikon, Leica and Zeiss

P-545.PD3 35 mm Petri Dish Holder for PI nano<sup>®</sup> Piezo Stages

P-545.SH3 Microscope Slide Holder for PI nano<sup>®</sup> Piezo Stages

P-545.PP3 Plain Plate for Accessories for PI nano<sup>®</sup> Piezo Stages

Additional accessories on request.

### Related Products

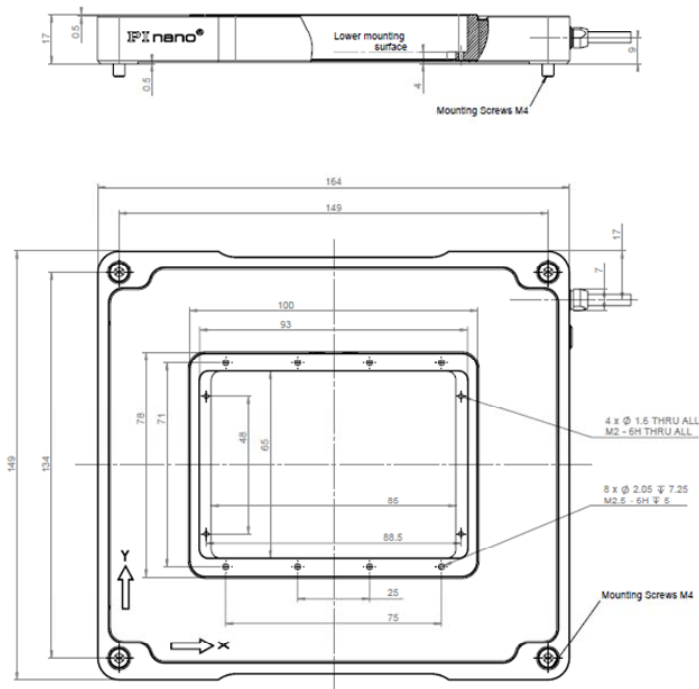
P-545 PI nano<sup>®</sup> XYZ Stage for SR Microscopy

P-736 PI nano<sup>®</sup> Z-Slide Scanner for SR Microscopy

P-725 PIFOC<sup>®</sup> Microscope Objective Nanofocus Drive

Models	PI nano <sup>®</sup> XY	PI nano <sup>®</sup> X	PI nano <sup>®</sup> Y	Units	Tolerance
Part# PR Sensor System	P-546.2R7	P-546.XR7	P-546.YR7		
Part# Cap Sensor System	P-546.2C7	P-546.XC7	P-546.YC7		
Active axes	X,Y	X	Y		
Integrated sensor	Piezoresistive / Capacitive	Piezoresistive / Capacitive	Piezoresistive / Capacitive		
Closed-loop travel	200x200	200	200	μm	
*Resolution	<1	<1	<1	nm	typ.
Linearity	+/-0.1 +/-0.05	+/-0.1 +/-0.05	+/-0.1 +/-0.05	%	typ.
Push/pull force capacity in motion direction	100 / 30	100 / 30	100 / 30	N	max.
Max. payload	500	500	500	g	max.
Ceramic type	PICMA <sup>®</sup>	PICMA <sup>®</sup>	PICMA <sup>®</sup>		
Recommended operating temp. range	20 to 30	20 to 30	20 to 30	°C	
Material	Aluminum	Aluminum	Aluminum		
Mass	0.8	0.8	0.8	kg	±5%
Cable length	2	2	2	m	±10 mm
Included controller	E-545	E-709	E-709		

\*Resolution of PI Piezo Nanopositioners is not limited by friction or stiction. Value given is noise equivalent motion measured with interferometer



P-546 dimensions. Stage can be configured as XY and single axis in X or Y direction.

Accessories: P-545.SH3 slide holder (above) and P-545.PD3 petri dish holder (below), dimensions in mm

