Motion Controller | NanoDrive

NEW

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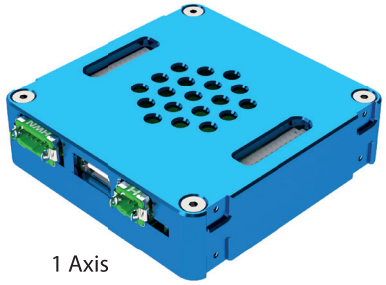
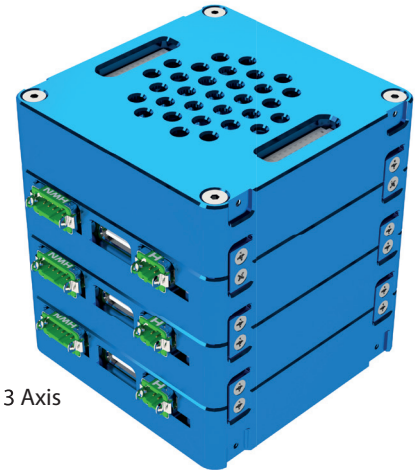
The NanoDrive is an ultra-compact motion controller compatible with all Micronix piezo motors, stepper motors, BLDC motors and DC motors. Multiple axes can be stacked as a compact multi-axis controller and interface with a computer via a RS-485 connector or USB Type C with support for power delivery.



1 Axis



3 Axis

KEY FEATURES

- Configurable motor type (Piezo Motor, Stepper Motor, BLDC and Brushed DC Motor)
- Ultra-compact and modular design allows stacking for multi-axis applications
- Low profile, <14mm height per axis without fan
- Open loop resolution down to < 1 nm (piezo)
- Closed loop resolution down to < 1 nm (dependent on encoder)
- A quad B differential digital (RS-422) and absolute (BiSS-C) encoder interface

TECHNICAL DATA

Axes	1, Stackable up to 6
Motor Type	Piezo Motor, Stepper Motor, BLDC Motor, DC Motor
Interface	USB Type C-PD, RS-485
Commands	ASCII
Input Power	10-48 V on 6 Pin Connector, USB Type C (PD - 100 W max)
Motor Output	Max Voltage 48 V, Max Current 1.2A (high current option for BLDC/DC 3A)
Resolution	< 1 nm
Trajectory Mode	Trapezoidal velocity profile
Trajectory Update Frequency	1 kHz
Servo Clock Frequency	10 kHz
Program Storage	32 storable programs
Enclosure Dimensions	L50 x W50
Software	Windows GUI, LabView VI, Python

ORDERING INFORMATION

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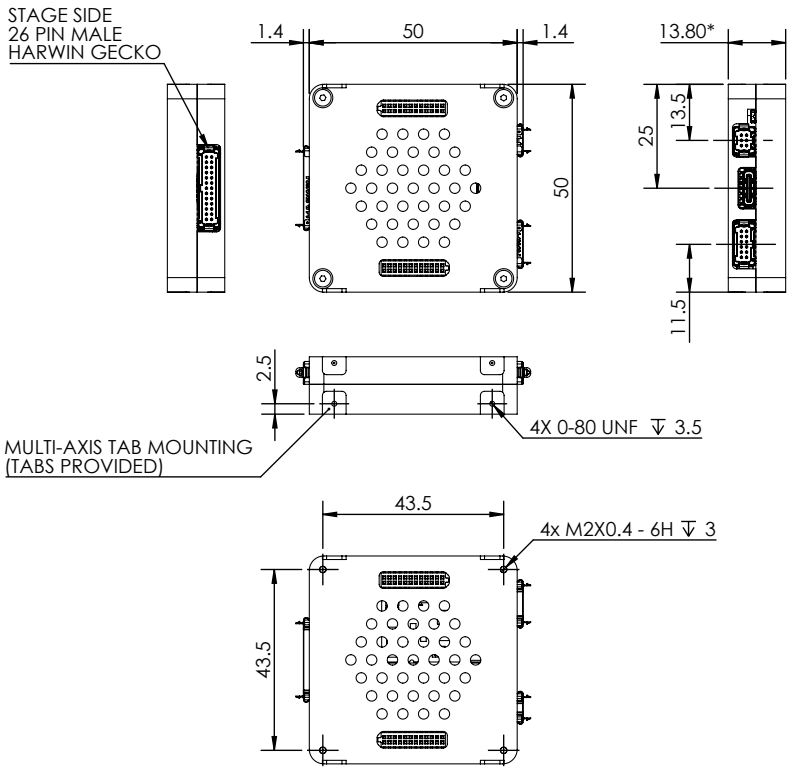
DRIVE	Piezo Motor	1
	Stepper Motor/BLDC Motor	2
	High Current BLDC/DC Motor	3
AXES	1	1
	:	:
	Up to 6 Axes	6
POWER SUPPLY **	50W (24V 2.10A)	0
	65W (24V 2.71A)	1
	36W (36V, 1A)	2
	160W (36V, 4.44A)	3
	220W (36V, 6.11A)	4
ENCODER INTERFACE	Digital Incremental (RS-422)	0
	Absolute (BiSS-C)	1

** Power supply dependent on stage specification.
Micronix will choose proper supply matching the stage.



• all dimensions are in millimeters

*2 or more axis stacks will include a fan enclosure the same height as 1 axis enclosure

Specifications are subject to change without notice.

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PRECISION MOTION SOLUTIONS