

Modular Motion Controller | MMC-110

The MMC-110 is a high performance piezo motor controller. It is available with our patented silent mode which operates the stick-slip piezo motors above the audible frequency for the human ear. This revolutionary technology is beneficial for noise sensitive applications such as medical instruments or consumer electronics. It allows speeds beyond 10 mm/s with our patented multi-phase piezo motor at resolutions of < 1 nm. Multiple units can be stacked as a compact multi-axis module and interface with a computer via a single USB 2.0 or RS-232 cable. MICRONIX Motion Control Language allows for easy programming through simple ASCII commands.

KEY FEATURES

- Integrated controller for stick-slip, multi-phase piezo stages
- **Drives one or two motors to achieve up to 2x specified motor force**
- **Patent silent mode for quiet motor operation**
- Compact, modular design allows for bench-top or 2U height rack mounting
- Open loop resolution down to < 1 nm
- Closed loop resolution down to < 1 nm (dependent on encoder)
- A quad B differential or sin/cos analog encoder feedback, optional absolute encoder feedback
- USB 2.0 or RS-232 interface (one interface for up to 16 axes)
- Windows GUI and LabVIEW VI

TECHNICAL DATA

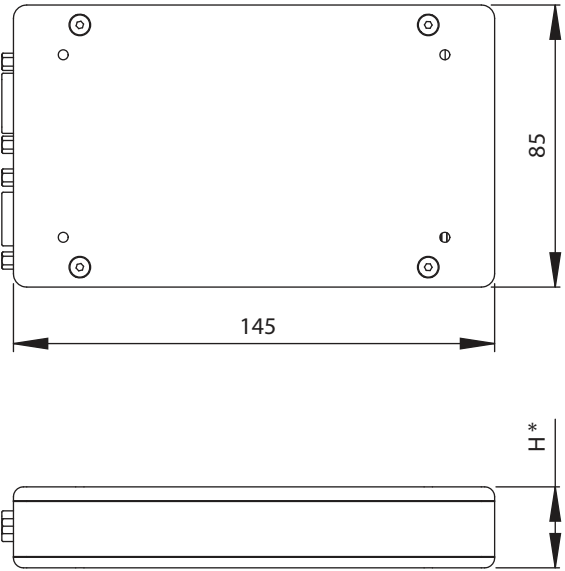
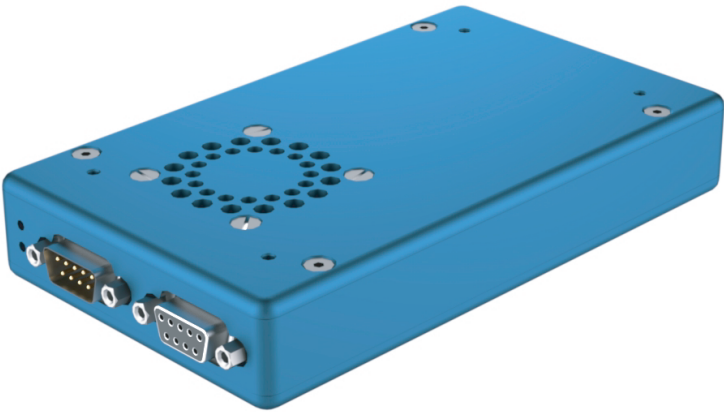
Axes	1, stackable up to 16
Motor type	Piezo Motor
Interface	USB 2.0, RS-232
Commands	ASCII commands
Power supply	Regulated 24 V DC (1 A per axis)
Speed, max	> 10 mm/s (stage dependent)
Resolution	< 1 nm
Trajectory mode	Trapezoidal velocity profile
Servo clock frequency	10 kHz
Program storage	32 storable programs
Enclosure dimensions	L145 x W85 x H25 mm
Software	Windows GUI, LabVIEW VI

ORDERING INFORMATION

MMC-110- 0

AXES	1 Axis 1	
	Up to 16 Axes [†] #	
POWER SUPPLY	50 W (1 Axis) 0	
	65 W (2 Axes) 1	
	90 W (3 and 4 Axes) 2	
	120 W (5 or more Axes) 3	
ENCODER INTERFACE	Analog (1 V _{pp}) 0	
	Digital (RS-422) 1	
	Absolute (BiSS C) 2	
MOTOR INTERFACE	Standard / 2-Phase 0	
	High Force / 4-Phase 1	

[†] please contact support for larger stacks



Axes	H
1	24.4
2	41.2
3	58
4	74.8
5	91.6
6	108.4

• all dimensions are in millimeters
* 3 or more axis stacks will include a fan enclosure same height as 1 axis enclosure