Motion Controller Card | MMX-120

NEW

Preliminary Available Q2, 2026

www.micronixusa.com | info@micronixusa.com | phone: +1 (949) 480 0538 | fax: +1 (949) 480 0538

The MMX-120 is a high-performance single-axis piezo motion control card for piezo-driven actuators and sub-nanometer positioning resolution (stage dependent) with Micronix's patented multi-phase piezo motor technology. Designed to interface with the MMX-RACK, multiple cards can be combined to create motion systems with up to 24 axes in a compact, high-density rack. The cards are easily field-replaceable, making repairs or system configuration updates simple and convenient. The MMX-RACK is sold separately; refer to its datasheet for additional details.

KEY FEATURES

- Open loop resolution down to < 1 nm
- Closed loop resolution down to 1 nm (dependent on encoder)
- A quad B differential digital (RS-422) , sin/cos analog, and absolute (BiSS-C) encoder interface
- Designed with MMX-RACK to create a high density controller
- Easily replace or expand number of axis on single system

TECHNICAL DATA

Axes	1, Expandable to 24 with MMX-RACK
Motor Type	Piezo Motor
Interface	USB 2.0, Ethernet 10/100 Mbps (via MMX-RACK)
Commands	ASCII
Input Power	12-48V ***
Motor Output	Max Voltage 48V, Max Current 5A ***
Resolution	1nm**
Trajectory Mode	Trapezoid Velocity Profile
Trajectory Update Frequency	1kHz
Servo Clock Frequency	10kHz
Program Storage	**32 storable programs**
Card Dimensions	L122.6 x W84x H15 mm
Software	Windows GUI, LabView VI

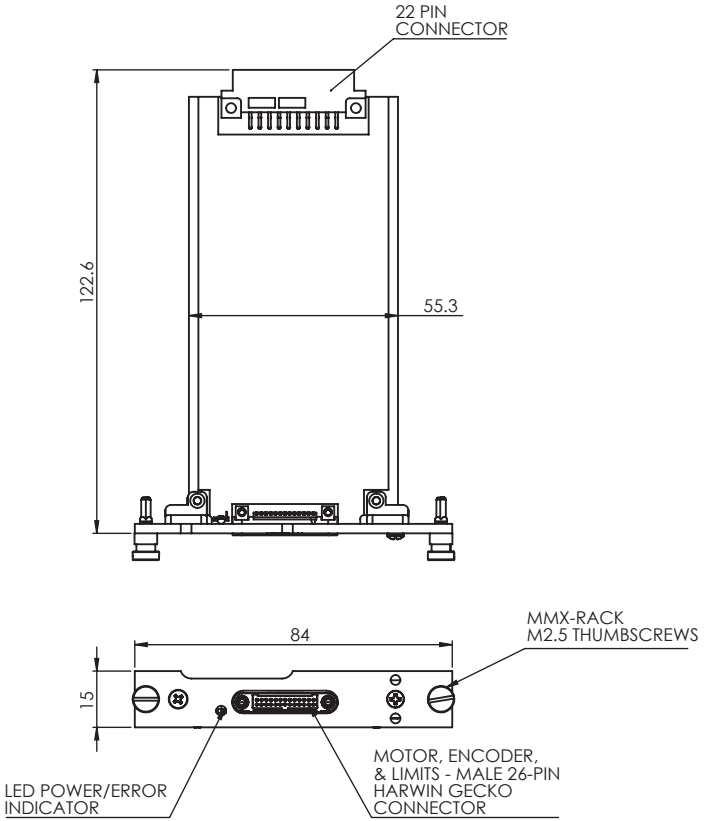
ORDERING INFORMATION

MMX-120 - | **0** | **1** | **N** | **1** | **0** |

ENCODER INTERFACE

- Analog (1 V_{pp}) **0**
- Digital (RS-422) **1**
- Absolute (BiSS C) **2**

** dependent on encoder
*** dependent on MMX-Rack



• all dimensions are in millimeters

Specifications are subject to change without notice.

micronix USA
PRECISION MOTION SOLUTIONS