

Single(multi)Axis MC-CQ Motion Control/ Amplifier System



SMALL BUT POWERFUL

The newest addition to National Aperture's family of electronics is the **MC-CQ** DC-Servo Motion Controller/Amplifier.

The **MC-CQ** is RoHS and CE compliant.

This small package contains not only a single-axis motion controller for use with our motorized stages, but also an amplifier and a user-friendly Serial Interface.

Each single-axis controller can be linked to multiple Control Units for an integrated **multi-axis Motion Control system**.

Your purchase will include an easy to use Software Application Development Interface, RS-232 serial cable.

- RoHS Compliant
- CE Marked
- Integrated Controller and Amplifier
- Small footprint
- Easy to use RS-232 Serial Interface
- Linkable to multiple Control Units
- Single-Axis becomes Multi-Axis
- Includes Software Application Development Interface
- DC power input with Secure-Lock-on connection
- Easy access fuse
- Front access ON/OFF power switch
- Controller provides Velocity and Position Mode closed-loop control w/programmable speed and acceleration and a rich Command-Set
- Clean-and-Simple-Connectivity facilitates Rapid Development

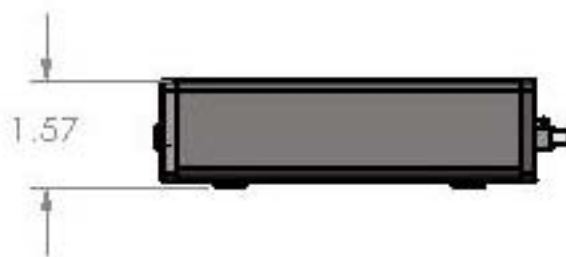
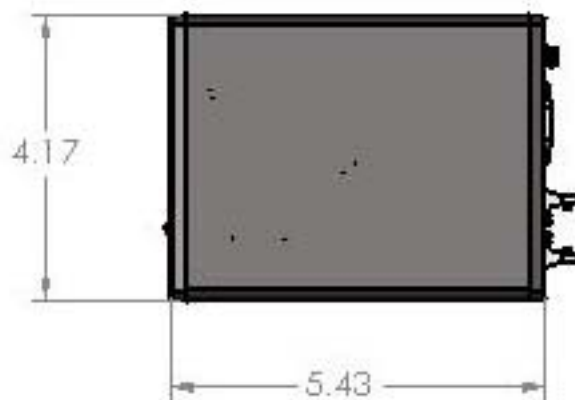
Optional 2,4,8 or 16 port RS-232-to-USB Expansion Module (Plug 'n Play)

When combined with National Aperture's "IMS Motion Console Software" users receive a "no-development-required" complete Motion Control system for up to four axes.

MC-CQ

Motion Control/Amplifier System

Dimensional Data



The information contained in this data sheet is subject to change without notice. Critical dimensions or specifications should be verified with our technical support staff.

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Specifications

Supply voltage	12-30 VDC, (15 VDC recommended for NAI stages)
PWM Switching Frequency	78.12 kHz
Efficiency	95%
Max Continuous Motor Current	6A with sufficient conductors for motor connection 1A with 28 gauge ribbon cable
Max Peak Motor Current	10A with sufficient conductors for motor connection and sufficient power supply current. 2A with 28 gauge ribbon cable
Controller Current Consumption	60mA (w/no Motor, Encoder, or Limit Switch Current)
5 Volt Outputs	50mA (Max Combined Load from Encoder Vcc and Limit Vcc)
Limit Switch Configuration	Switches to ground expected (Controller incorporates 1K pullup resistors to 5V)
Limit Switch Logic Levels	low 0-0.5V, high 4.0-5.0V
Encoder Input Logic Levels	low 0-0.5V, high 4.0-5.0V
Encoder Input Max Frequency	400kHz
Maximum Motor Velocity	30,000 rpm (do not exceed stage speed rating)
Baud Rate	600, 1200, 2400, 4800, 9600, 19,200, 38,400, 57,600,115,200
Serial EEPROM Program Memory	6656 bytes
Operating Temperature	0 to 70° C
Storage Temperature	-25° to +85° C

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