

FEATURES

- Multiple Computer Interfaces Available
 - USB interface (800 Hz commands)
 - TTL Digital (4000 Hz commands)
 - Ethernet (2000 Hz commands)
- Up to 295V output
- 8-bit digital to analog converter (DAC) precision on the USB interface and up to 16-bit on the TTL & Ethernet
- DE designed to drive a 3nF load
- User-friendly TTL interface via National Instruments digital card
- The USB 32-channel drive electronics has an integrated microcontroller with SPGD metric adaptive optics inside the electronics via an optional BNC photodiode input
- Microsoft Windows operating system basic software package and external interface provided

APPLICATIONS

- Membrane Deformable Mirrors
- MEMS Electrostatic Actuators

Packaged Drive Electronics

32-channel USB MDM DE



64+ TTL MDM DE



DESCRIPTION

This drive electronics packages provides a digital USB, Ethernet, or TTL interface from a control computer to many actuators requiring high voltage and low current like electrostatic, piezoelectric, or electrostrictive actuators. The drive electronics consist of a power supply board and digital drive electronics board(s). Each drive electronics board is capable of driving 32 channels of high voltage and can be combined with a single digital interface to have up to 96 channels of high voltage control. The drive electronics board was designed with on-board DACs that are scalable in digital resolution from 8 bits to 16 bits in 2-bit increments to provide the option of higher resolution for some applications.

Typical Drive Electronics Specifications



Specification	32-Ch USB MDM DE	64+ NI MDM DE
Maximum Voltage	300V	300V
Rise Time	0.25 ms @ 10 pF load	0.25 ms @ 10 pF load
Computer Interface	USB	TTL via NI-6259
DAC Bits	8	12
Maximum Channels at Max Speed	32	232
Maximum Update Rate	800 Hz	4 kHz
Package Size	6"x6"x3"	1.75"x9"x9"
		1U ½ W ½ H Rack Size
Features	Optional Internal Metric AO Microcontroller, Optional Photodiode Input	NI 6259 PC Interface, Compact Form Factor, Scalable channels without loss of speed
Starting Price	\$5k	\$10k

Windows Software Interface

