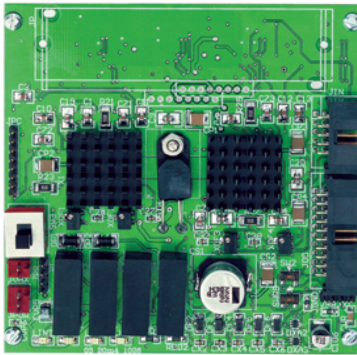


Miniature Multi-channel Piezo Driver Card



General Photonics' miniature piezo driver card is a precision, low-noise, low-drift, high voltage controller designed specifically for piezo actuators. It provides up to 4-channel piezo drive voltages of up to 140 volts each. Because there is an on-board HV DC/DC converter, no high voltage power supply is required. The card can be configured to accept either a ± 12 volt power supply or an optional external 160-volt power supply (PWR-002 recommended). The output voltage of each channel can be controlled either with an input analog signal or a 12-bit TTL signal. Under analog control, the board simply acts as a 4-channel voltage amplifier with 30 V/V amplification. The range of the input voltage is 0 to 4.7 volts to obtain an output voltage of 0 to 140 volts. The output voltage can also be controlled by a computer equipped with a digital I/O card or by a microprocessor. The easy-to-use MPD-001 is ideal for General Photonics dynamic polarization controllers (PolarRITE™ II and PolarRITE™ III), and phase shifters (FPS-001), as well as for other devices with piezo actuators from third parties.

Specifications:

External Analog Input	10 pin
External Digital Input	20 pin
Number of Channels	Up to 4
Max. Output Voltage	140 V
Max. Output Current ¹	20 mA / channel all channels (continuous) 60 mA single channel (continuous) 60 mA per channel (peak)
Max. Analog Control Voltage	5 V
Analog Input Gain	30 V/V ± 1 %
Digital Control Resolution	12 Bits
Input Impedance	> 20 k Ω
Output Impedance	50 Ω
Noise ²	< 40 mV (RMS)
-3dB Bandwidth ³	16 kHz
Power Supply ⁴	+12 VDC/1.2A, -12 VDC/0.1A, or external PWR-002
Operating Temperature	0 ~ 40 °C
Storage Temperature	-20 ~ 60 °C
Board Dimensions	100 (W) x 100 (L) x 20 (H) mm

Features:

- No high voltage supply needed
- Fast response and low noise
- Digital and analog control
- 12-bit TTL control resolution
- Compact

Applications:

- Piezo based polarization controllers
- Piezo based phase shifters
- Piezo based actuators
- High resolution translation stage
- Remote positioning

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Notes:

1. When an external high voltage supply with sufficiently high power is used, the 20 mA/channel limit can be increased to 60 mA/channel. Contact General Photonics for details.
2. Measured with 0.18 μ F loading and output voltage of 140 V.
3. Measured at 140 V output without loading.
4. If PWR-002 is to be used, the on-board DC-DC converters on the MPD-001 will be bypassed. PWR-002 comes with +/-12 VDC and 160 VDC. Other 160 VDC power supplies may also be used. Contact General Photonics for details.

Ordering Information:

MPD — 001 —

Channels:
2X = 2 Channel
3X = 3 Channel
4X = 4 Channel

