

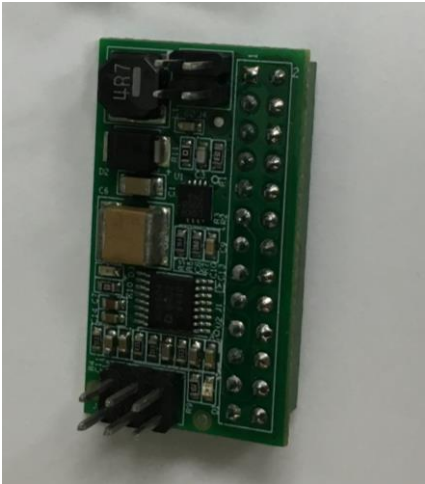


Driver Board for 2D MEMS Chip

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The 2D MEMS Driver Board (PN 786052) provides the necessary drive circuitry for the 2D MEMS Chip ([PN 786041](#)), and Header ([PN 786051](#)), allowing the user to control four analog voltages between 0 and 60V that actuate the MEMS mirror. The required power supply for the driver PCB is 3.3V/5V and its internal HV boost circuit provides the 60V power supply to the HV DAC (AD 5504). The 26-pin connector on its back side is designed for connecting to the Raspberry Pi but it will work with any SPI hardware. Software can be used to write voltages through the SPI interface and such Python software is provided by AGM to work with the Raspberry Pi. The 6-pin connector on its front side is designed to connect to the MEMS header ([PN 786051](#)) with a ribbon cable.

The core processing capability of the driver board comes from the chip AD 5504, which is a four-channel HV 12-bit DAC. The signal from each output channel is further conditioned with an RC filter, with series resistor of 50kΩ and a RC time constant of 1 msec. The HV DAC provides four analog voltages (0-60V) needed to drive the [2D MEMS micromirror chip](#). The driver board is simple to control with any standard SPI hardware/programming software platform.



AGM Part Number 786052

