

Reduced-Order Configurations Available at Reduced Cost

### ADAPTIVE OPTICS MADE EASY

The PTT489 DM system is a high-performance, factory calibrated deformable mirror and precision, low-noise drive electronics. Intuitive mirror positioning commands use piston/tip/tilt values or Zernike coefficients. The USB interface makes setting the system very easy.

### HIGH-QUALITY OPTICAL DEVICE

The unique PTT489 design uses robust single-crystal-silicon mirror segments that remain flat over large temperature ranges and incident power of 100W/cm<sup>2</sup> and higher. Precision linear open-loop piston-tip-tilt positioning enables high-performance adaptive-optics (AO) corrections for atmospheric correction, retinal imaging, and microscopy. Fully independent segment positioning enables the ability to implement AO, phased arrays, beam shaping, fiber coupling, and many other applications. Reduced-order configurations are available for applications requiring less actuators.

### PROVEN PERFORMANCE

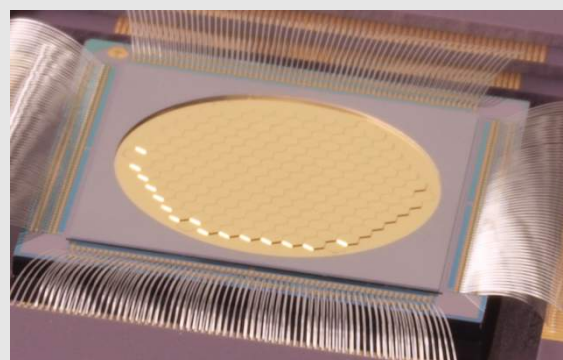
The DM is in use in applications that range from state-of-the-art retinal imaging and microscopy to high-contrast imaging systems developed by NASA for planet detection. Experience how the PTT489 DM can meet your imaging, microscopy, academic, or industrial needs.



Iris AO, Inc.

### PTT489 DM SYSTEM SPECIFICATIONS

- ✓ Precision Linear Open-Loop Positioning
- ✓ DM Type: 489 actuator, 163 piston-tip-tilt segments
- ✓ Stroke: 5 or 7  $\mu\text{m}$
- ✓ Tilt Angle:  $\pm 4$  or  $\pm 6.4$  mrad
- ✓ Optical Coating: Gold, protected-aluminum, protected-silver, dielectric
- ✓ Open-Loop Flat Surface Figure:  $< 30$  nm rms
- ✓ Inscribed Aperture: 7.7 mm
- ✓ Mechanical Response:  $f_{-3\text{dB}} = 2.3$  kHz
- ✓ Drive Electronics: Low noise, 14-bit resolution, update rate  $> 2\text{kHz}$  with USB Interface
- ✓ .NET API C/C++ Interface Libraries
- ✓ Windows OS & Linux compatible



### PTT489 DM SYSTEM CONTENTS

- ✓ Factory calibrated PTT489-5 DM
- ✓ Smart Driver II-512 USB electronics
- ✓ Printed-circuit-board interface
- ✓ Mechanical mounting block & interface cables
- ✓ Controller GUI and .NET API library

### PTT489 DM OPTIONS

- ✓ High-stroke: 7  $\mu\text{m}$
- ✓ Ultra flat  $< 7$  nm rms (metal coating)
- ✓ High-speed computer interface supporting  $> 6.5$  kHz update rates
- ✓ Dielectric coatings from 188-1550 nm
- ✓ Reduced-order configurations: 183, 255, or 363 actuators
- ✓ Geometrically matched hexagonal Shack-Hartmann lenslet array

Contact Iris AO for additional options or DM customization. Drive electronics sold separately.