

Reduced-Order Configurations Available at Reduced Cost



Iris AO, Inc.

PTT489 DM SYSTEM SPECIFICATIONS

- ✓ Precision Linear Open-Loop Positioning
- ✓ DM Type: 489 actuator, 163 piston-tip-tilt (PTT) segments
- ✓ Segment Pitch: 0.606 mm
- ✓ Segment Size: 0.7 mm
- ✓ Stroke: 5 or 7 μ m
- ✓ Tilt Angle: ± 4 or ± 5.6 mrad
- ✓ Optical Coating: protected Silver, Gold, protected Aluminum, dielectric
- ✓ Open-Loop-Flat Surface Figure: < 30 nm rms
- ✓ Inscribed Aperture: 7.7 mm
- ✓ Maximum Operating Temperature: 50°C
- ✓ Drive Electronics: Low noise, 14-bit resolution, update rate >2 kHz with USB Interface
- ✓ .NET, C/C++ & Matlab
- ✓ Windows OS & Linux compatible

ADAPTIVE OPTICS MADE EASY

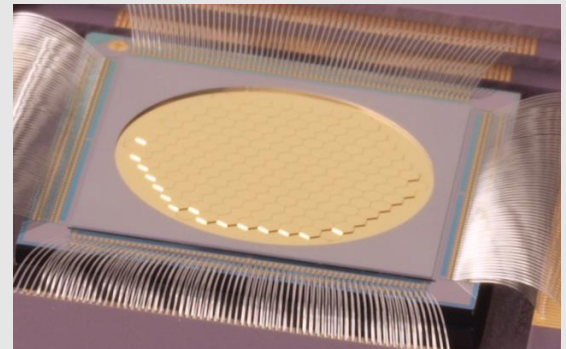
The PTT489 DM system is a high-performance, factory-calibrated deformable mirror with precision, low-noise drive electronics. Intuitive mirror positioning commands use piston-tip-tilt (PTT) values or Zernike coefficients. The USB interface makes setting up the system very easy. Stable DM calibration enables years of reliable wavefront control.

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/cm² and higher. Precision linear open-loop piston-tip-tilt positioning enables high-performance adaptive-optics corrections using Zernike modes. Fully independent segment positioning enables creating smooth wavefronts as well as discontinuous ones such as phased arrays and optical vortices. Reduced-order configurations are available for applications requiring less actuators.

PROVEN PERFORMANCE

Iris AO DMs are in continual use in applications that range from state-of-the-art microscopy and laser-beam correction to high-contrast imaging systems developed by NASA for planet detection. Experience how the PTT489 DM can meet your imaging, microscopy, beam shaping, academic, or industrial needs.



PTT489 DM SYSTEM CONTENTS

- ✓ Factory calibrated PTT489-5 DM
- ✓ Smart Driver II-512 USB drive electronics
- ✓ Compact enclosure
- ✓ Mechanical mounting block & interface cables
- ✓ DM Controller GUI and software libraries

PTT489 DM OPTIONS

- ✓ High-stroke: 7 μ m
- ✓ Ultra flat < 7 nm rms (metal coating)
- ✓ High-speed computer interface supporting > 6 kHz update rates
- ✓ Dielectric coatings from 193-1550 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.