ClariFast™

ClariFast™ is AgilOptics' newest closed loop adaptive optics system built around a membrane deformable mirror and a wavefront sensor. ClariFast™ includes an imbedded microprocessor as part of the Hartmann wavefront sensor (HWFS). As the HWFS measures the phase errors in the user's beam, the microprocessor analyzes the errors into Zernike coefficients and instructs the DM to take the inverse shape in order to minimize the system errors. This lightweight, compact combination redefines the future of affordable adaptive optics!

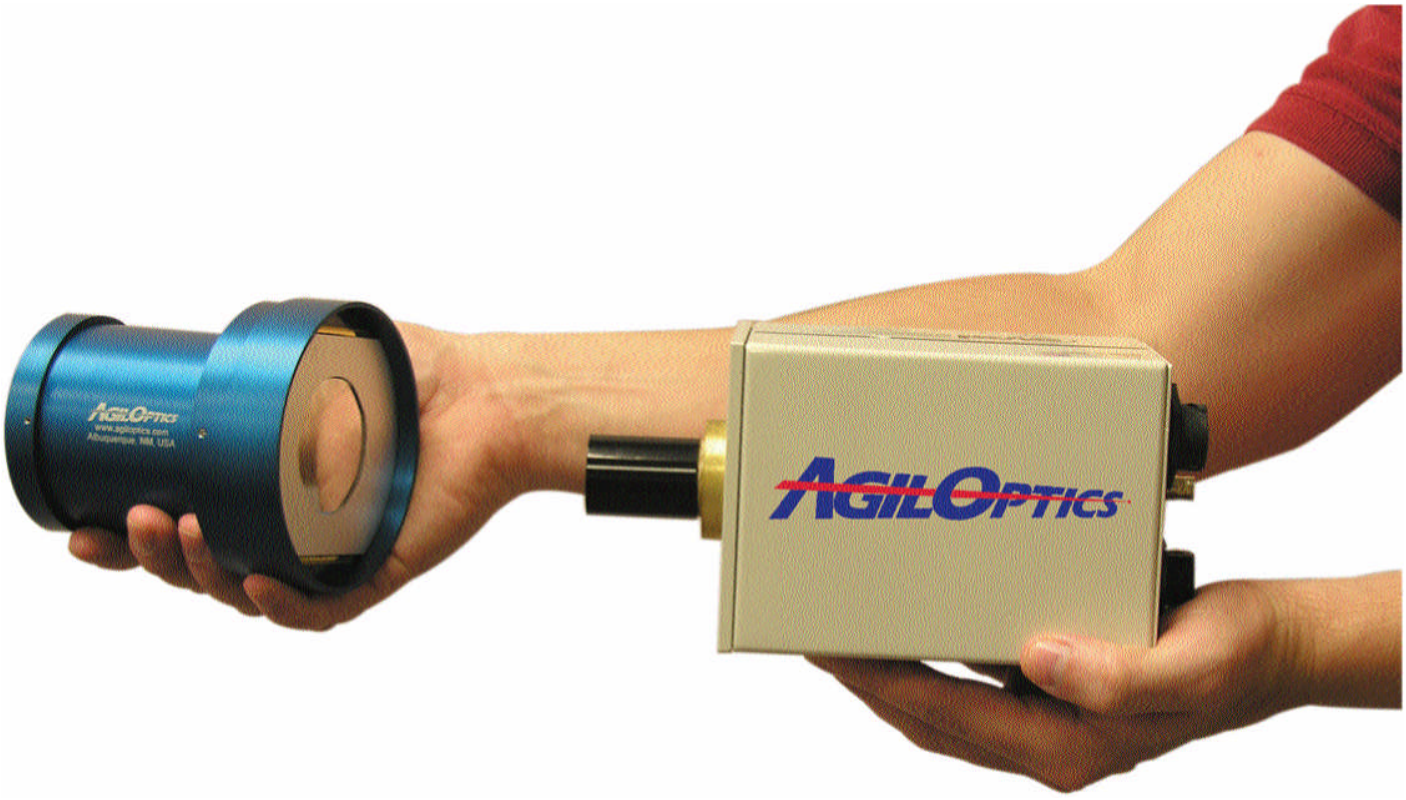
Features include automated closed loop operation of greater than 80Hz, the ultra-compact Unifi™ deformable mirror system and a Hartmann-style WFS utilizing a fast frame rate CMOS camera for wavefront analysis. The operating system is Linux-based and uses a USB 2.0 interface for communication between units. ClariFast™ is compatible with our Unifi™ deformable mirrors for most optical applications.

ClariFast™ is so light and compact that it can be held with one unit in each hand!

A Compact, Closed Loop Adaptive Optics System

Features:

- Two separate File-card box sized units: Unit One: Unifi™, novel packaging of a DM and a Driver in one 4" optical mount Unit Two: Dedicated Microprocessor integrated with CMOS-based HWS camera
- >80Hz closed loop operation
- Linux-based operating system
- USB communication between Units (Type B connector)
- Remote operator controls through a Graphical User Interface over Ethernet
- Selection of compatible AgilOptics' mirrors from 16mm, 25mm, 30mm or 50mm and up to 61 actuators
- Very low electrical power consumption (-10 watts)
- Reasonable cost
- Minimal impact on your system's size and weight
- Easily adaptable to your optical design



ClariFast™

A Compact, Closed Loop Adaptive Optics System

What ClariFast™ Can Do For You:

- *Correct aberrated beams at 50 frames per second with USB 2.0 communication*
- *Stabilize & optimize laser resonators when used intra-cavity (ICAO)*
- *Monitor & control beam wave fronts*

ClariFast™ Systems

- **All with Unifi™: DM + Driver**

EMBEDDED

- **Completed Embedded Microprocessor**
- **Most expensive, Most compact**
- **30 by 30 Hartmann Wavefront Sensor**
- **100 Mbps Ethernet Connection for network configuration**
- **50 frames per second closed loop**
- **300 MHz CPU with Linux 2.4 Kernel**
- **Zernike, Fourier or Legendre Convergence Options**

LAPTOP

- **Mid-sized solution**
- **Notebook Computer, Wavefront Sensor**
- **30 by 30 Hartmann Wavefront Sensor**
- **Up to 80 frames per second closed loop**
- **> 1.6 GHz CPU with Linux 2.4 OS**
- **Zernike, Fourier or Legendre Convergence Options**

DESKTOP

- **Largest and Most affordable**
- **Mid-size Tower computer, USB camera**
- **30 by 30 Hartmann Wavefront Sensor**
- **Up to 80 frames per second closed loop**
- **2.6 GHz P4 processor with Linux 2.4 OS**
- **Zernike, Fourier or Legendre Convergence Options**

AGILOPTICS®

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