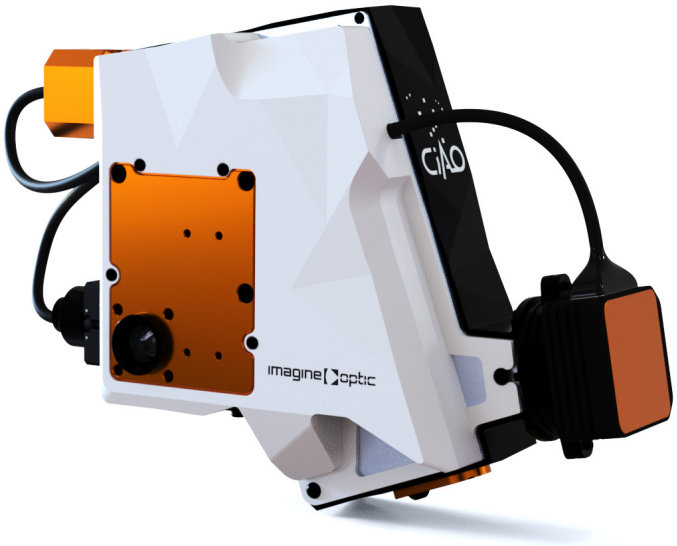
CIAO VIS

Improve your telescope resolution

Adaptive Optics platform
Small, simple & robust

Up to 1kHz closed loop
Simply interfaced to all telescopes
Compatible with extended sources



Preliminary
Datasheet

imagine optic

CIAO VIS +

CIAO is a compact innovative adaptive optics add-on that enhances your telescope's performance.

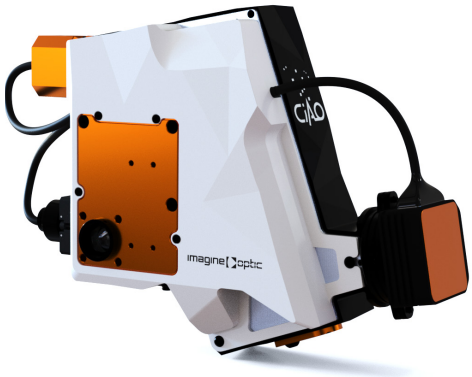
We customize for our users, so please contact us to discuss how CIAO could benefit your application !

APPLICATIONS

+ High resolution imaging on planets or solar surface thanks to its compatibility with extended source
+ Stellar interferometry
+ High performance spectrometry
+ Space Situational Awareness (SSA)
+ Laser guide star enhancement

FEATURES

+ Includes 13x13 microlenses high performance HASO wavefront sensor optimized for low flux & high speed
+ Corrects up to 40 modes thanks to piezo-electric deformable mirror
+ Facilitates access to beam-splitter allowing to choose one adapted to your needs (dichroic function or split ratio)
+ Integrates a source, making calbration & auto-check easier
+ Is optimized for f/10 telescopes, but customization available for any f#
+ Includes a high dynamic tip-tilt to correct telescopes mount pointing errors
+ Can include bypass (optional)



SPECIFICATIONS*

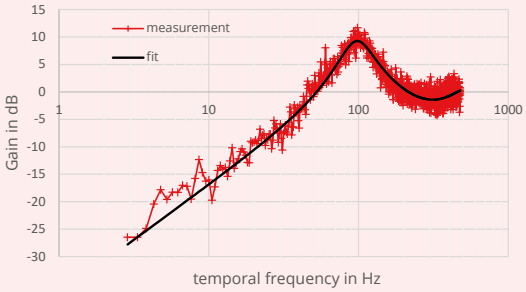
CIAO

HASO wavefront sensor nb of microlenses	13x13
HASO accuracy	6nm RMS
HASO repeatability @550nm @200ph/microlens	30nm RMS
Spectral range	400-1100nm (White light or monochromatic)
Deformable mirror	40 piezo actuators
Max closed loop frequency	950Hz
BeamSplitter	50-50 (other split ratio or dichroic available)
Closed loop average delay	< 1.7 ms
Internal source	520nm
Switch from telescope to internal source	motorized
Max point source magnitude on a 500mm dia telescope	5
Rejection bandwidth cut-off frequency	≥ 45Hz
Output f#	same as telescope
Bypass f#	same as telescope
Dimension	315x315x127mm^3
Weight	3kg
Cable length to PC	2m (extenders available, optional)

Compatible telescopes

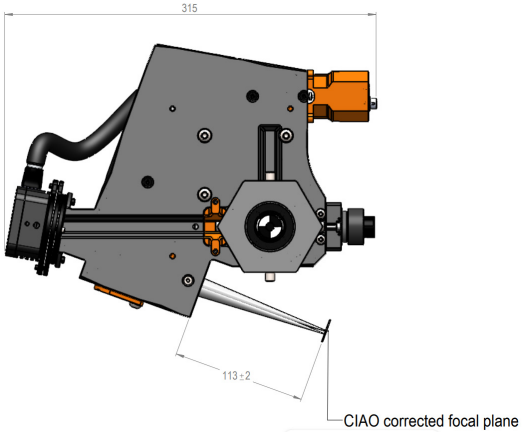
Diameter	from 200mm to 1m
Input f#	f/9 to f/12 (other f# available with custom)
Mechanical interface	T2 (M42x0.75mm)
Pointing accuracy	± 1arcmin

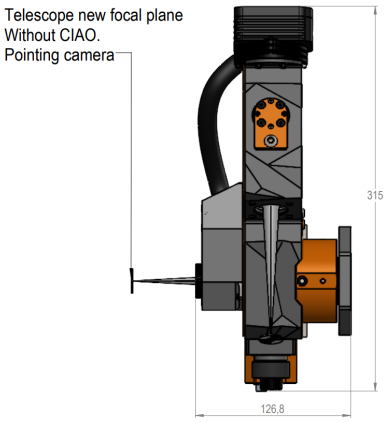
CIAO VIS rejection bandwidth, f=980Hz, g=0.45
Analytical fit with a delay of 1.6ms
cut-off@0dB : 49Hz

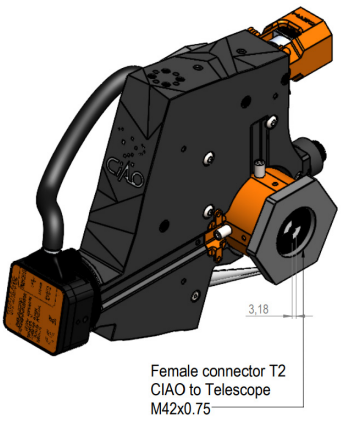


*Subject to changes without further notice

DIMENSIONS (mm)







SOFTWARE

WAVESKY
Wavesky was made with a RunTime approach, meaning it has no GUI. When connected via TCP-IP, you can setup the server, drive the loop and make diagnostics.
It includes C++ and Python client examples and runs under Win10 and Win11 environment.

MOUNTING

Below is an example of CIAO mounted on a C11 telescope.

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