

SBIG® AO-X Adaptive Optics

AFFORDABLE TIP/TILT ADAPTIVE OPTICS

The SBIG AO-X fourth-generation tip/tilt adaptive optics solution combines with our SBIG StarChaser SC-3 off-axis guiding camera to provide tack-sharp stars even in less-than-ideal seeing conditions with imperfect telescope mounts. Sub-second corrections re-centre the starlight on the main detector, providing superior results.



Sharp Stars, Better Data, Less Effort

This affordable solution is designed for telescopes from 0.3m to over 1m equipped with up to a 3.5"/ 90mm light path. Unlike expensive deformable mirror solutions that require wavefront sensors, laser guide stars, and a lot of back focus, the SBIG AO-X voice-coil technology tips and tilts an optical gimbal to lock starlight on the detector, at rates up to 10Hz, using an SBIG StarChaser SC-3 off-axis guiding camera.

The starlight passes through a 10mm thick plane parallel BK-7 glass plate that is supported on a two-axis gimbal mount. The gimbal can be tilted +/- 2.4 degrees using electromagnetic voice coil technology. The tilt in each direction produces a deflection of about +/- 144 microns in each direction, corresponding to a correction of +/- 16 pixels on an SBIG AC4040 or STX-16803 detector. This tilt has no significant focal shift, distortion, rotation, or change in magnification associated with it. The smallest move increment is approximately 1/7th pixel. The window has an anti-reflection coated specified to be less than 1% reflection per surface from 400 to 900 nm wavelength.

SPECIFICATIONS

Dimensions	6.8 x 6.1 x 1.2in (175x154x30mm)
Weight	1 pound 15 ounces (880 grams)
Optical Backfocus	1.051 in (26.7 mm)
Interface	I ² C in/out
Compatible Cameras	SBIG STX, STXL self-guiding cameras SBIG AC-4040, AC-2020 sCMOS cameras with SBIG StarChaser SC-3 SBIG STL series with StarChaser SC-3 and STL to SC-3 adapter Third party cameras with StarChaser SC-3 and suitable adapters
Software	MaxIm DL Pro recommended

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