

SBIG® STARCHASER™ OFF-AXIS GUIDING CAMERAS



Diffraction Limited invented the SBIG StarChaser series, an all-in-one, independent, off-axis guiding camera with adaptive optics support. The enhanced design of the brilliant SBIG StarChaser SC-4 and SC-4C includes a 0.7x focal reducer, an easier-to-adjust pick-off mirror, and a simple focus knob for one-time setup. Both versions share a clever design that combines a pick-off mirror, guider camera, guide port, and adaptive optics control.

Stop wasting time with ruined exposures caused by flexure between the main camera and guider. Off-axis guiding eliminates this problem by using the same optical path for the main camera and the guider. Unlike most off-axis guider assemblies that are awkward to use, consume too much back focus, and require precise positioning of a camera inside an eyepiece holder, the slim, integrated design of the SBIG StarChaser makes this a breeze.

Versions for Large Format and Compact Format Cameras

The SC-4 version, designed for 3" focusers, is intended for large format cameras. It operates independently of the main camera and is compatible with a variety of cameras and filter wheels using the standard SBIG large format bolt pattern. It can be directly mounted to an SBIG AFW Filter Wheel or the older FW7-STX, and it also works with the SBIG AO-X tip/tilt adaptive optics unit. We recommend using the 10018 3-inch x 24tpi adapter or the ACC09 3-inch adapter to ensure light reaches the guide sensor and does not vignette the main camera sensor.

The SC-4C version, tailored for 2" focusers, is intended for compact format cameras, such as the Aluma CCD series and the SBIG FW8S-Aluma filter wheel. It is also compatible with the AO-8A Adaptive Optics unit.



SC-4



SC-4C



The SBIG StarChaser SC-4 & SC-4C Features:

Monochrome advanced scientific CMOS sensor	1280 x 1024 CMOS sensor with 4.8 μm pixels, an ideal match for common telescopes
Electromechanical dark shutter	Convenient dark frames, ideal for robotic automation
Adjustable pick-off mirror	Easy focus and simple to lock in position with minimal vignetting
USB 2.0 interface	Supports longer cable lengths than USB 3.0
ST-4 guide port	Controls telescope mount for round stars, precise tracking
Auxiliary control port	Controls optional tip/tilt adaptive optics unit
ASCOM Standard and DL Imaging drivers and Software Development Kit available	Windows 10 and 11 compatible. Contact us regarding additional platform support.
Cyanogen Imaging® MaxIm LT Imaging software	Get up and running immediately with the included image acquisition and processing software. Upgradable to MaxIm DL Pro for robotic automation, telescope and observatory control

TECHNICAL SPECIFICATIONS

OS Compatibility	Windows 7, 8, 10 x86/x64, Windows 11
Computer Interface	USB 2.0 Mini
Full Frame Download	0.2 sec
Pixel Digitization Rate	72 megapixels / second
A/D Converter	10 bits
Weight	0.9 lb / 400 g
Read Noise (typ)	5 e- typical
Power	12V, 300 mA
Exposure	13.5 ns to 59.26 s
Pixel Size	4.8 μm
Total Pixels	1280 x 1024
Sensor Size	6.18 mm x 4.95 mm
Focal Reducer	0.7x
Shutter	Electronic Global Shutter plus Mechanical Dark Frame Shutter
Imaging Sensor	Astronomical CMOS 1.3 Megapixel
Dark Current e-/p/s	5 e-/p/s typical at 20C
Imaging / Pixel Array	1280 x 1024 pixels
Full Well Capacity	10,000 e-
Backfocus	Electronic Global Shutter plus Mechanical Dark Frame Shutter

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