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STF-8300

SBIG is proud to introduce the new STF-8300, the first high speed 8300 camera with user-selectable automatic image processing! A few key updates include:

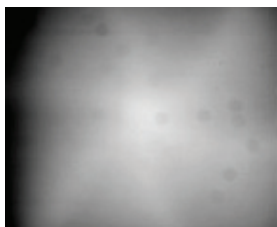
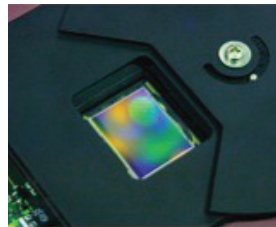
- 10 Megapixel/second digitization rate for faster image download (Full frame < 1 sec.)
- Faster sampling speed and full frame image buffer, resulting in higher quality images with fewer artifacts and cleaner FFT's
- Less post processing required (and with the extra low dark current of 8300 CCD casual imagers may not need to perform any post processing).
- User-selectable choice of automatic image artifact repair for cleaner images or raw images for total control in post-processing.



The new Model STF-8300 is SBIG's second-generation camera using the popular KAF-8300 CCD. Integrated 5-position and 8-position filter wheels are available as well as a new integrated, low profile, wide field off-axis guiding accessory that, along with the

ST-i, allows the STF-8300 to act as a self-guiding camera. SBIG offers several packages that include the most popular configurations of these accessories for extra savings when purchased together.

The STF-8300 also continues the SBIG tradition of a user-rechargeable desiccant plug and even-illumination, photometric shutter, and user-selectable automatic-artifact-repair or raw images for total control in post processing. SBIG's mechanical shutters have been designed for highly reliable, even-illumination, of the sensor even at short exposures. Even-illumination is especially critical when taking flat fields with exposures of less than a second or even several seconds. This is very common when taking sky flats.



Flat field from iris/leaf shutter

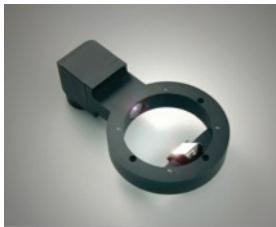
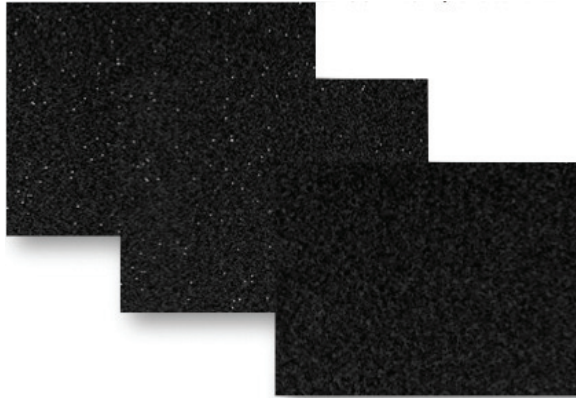


Flat field from SBIG Even-Illumination Shutter

STF-8300 Typical Specifications

CCD	Kodak KAF-8300
Pixel Array	3326 x 2504 pixels
CCD Size	17.96 x 13.52 mm
Total Pixels	8.3 million
Full Well Capacity	~25,500e-
Dark Current	0.002e- / pixel / sec at -10°C
Antiblooming	1000X
Shutter	Even-Illumination, Mechanical
Exposure	0.09 to 3600 seconds
A/D Converter	16 bits
Gain	0.37e- / ADU
Read Noise	~9.3e-
Binning Modes	1 x 1, 2 x 2, 3 x 3, etc. – 15 x 15
Digitization Rates	10 Megapixels / Second
Full Frame Download	Less than 1 second
Cooling	-40°C max. from ambient
Temp. Regulation	+/- 0.1 degree
Power	12VDC, 3 amps max
Interface	USB 2.0
Computer Compatibility	All Windows O/S, 32-bit and 64-bit, Mac OSX
Camera Body Size	2 x 4 x 5 inches (50 x 100 x 127 mm)
Mounting	T-thread, 2" Nosepiece
Weight	1.8 pounds (0.8 kg)
Backfocus	0.69 inches (17.5 mm)

Below you will see the results of the STF-8300 camera with user-selectable automatic image processing. These 30 second dark frames were taken at room temperature to accentuate the number of warm pixels. The first frame is unprocessed, the second frame has a medium filter, and the third frame the most aggressive filter. Each shows fewer bright pixels and each has correspondingly lower noise in the image. The user can select from eight levels of filter strength to suit his needs.



The new STF-8300 can be paired with the new low profile, wide field Off-Axis Guider (OAG), which allows self-guiding. The OAG is designed with a 7-element relay lens system that places the position of the guide camera to the side of the

main camera and filter wheel, which minimizes the impact on overall backfocus. The same lens system also acts as a 0.7X focal reducer that doubles the field of view of the guide camera compared to a typical off-axis system. The OAG adds only $\frac{3}{4}$ in. (19mm) backfocus to the camera and filter wheel. The guide camera can also be rotated in 90 degree increments. The OAG can be used on both mono and color cameras (with appropriate adapter) and is 100% backward compatible with all ST-8300 cameras.

Is the STF-8300 the right camera for me?

That depends, the STF-8300 was engineered for with the following imagers in mind:

- Beginning and advanced imagers who want a fast, compact, low noise camera with a generous field of view.
- Imagers with short tube refractors.
- Imagers with moderate size catadioptric telescopes < 14" aperture.
- Imagers who want a high performance 1 shot color imager.
- Imagers who want similar field of view and image resolution as their DSLR Camera, but with a cooled CCD giving better performance (higher sensitivity and lower noise).

For more information on the STF-8300 and the Wide Angle Off Axis Guider, we invite you to give us a call today!



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Special Packages Include:

Package	Part No.
STF-8300M OAG-FW Package • STF-8300 Monochrome • FW5-8300 Filter Wheel • OAG-8300 Off-Axis Guider	80-12060-00
STF-8300C Color OAG-FW Package • STF-8300 Color Camera • Filter Wheel Spacer • OAG-8300 Off-Axis Guider	80-12067-00
STF-8300M Self-Guiding Package w/ST-i mono • STF-8300 Monochrome • FW5-8300 Filter Wheel • OAG-8300 Off-Axis Guider • ST-i Monochrome Autoguider and Planet Camera	80-12061-00
STF-8300M Self-Guiding Package w/ST-i color • STF-8300 Monochrome • Filter Wheel Spacer • OAG-8300 Off-Axis Guider • ST-i Color Autoguider and Planet Camera	80-12062-00
STF-8300C Color Self-Guiding Package w/ST-i mono • STF-8300 Color Camera • FW5-8300 Filter Wheel • OAG-8300 Off-Axis Guider • ST-i Monochrome Autoguider and Planet Camera	80-12068-00
STF-8300C Color Self-Guiding Package w/ST-i color • STF-8300 Color Camera • Filter Wheel Spacer • OAG-8300 Off-Axis Guider • ST-i Color Autoguider and Planet Camera	80-12069-00

Special Packages Include:

Package	Part No.
STF-8300M Pro Package w/ST-i mono • STF-8300 Monochrome • FW5-8300 Filter Wheel • OAG-8300 Off-Axis Guider • ST-i Monochrome Autoguider and Planet Camera • 36mm LRGB Filter Set, 36mm H-alpha Filter	80-12063-00
STF-8300M Pro Package w/ST-i color • STF-8300 Monochrome • FW5-8300 Filter Wheel • OAG-8300 Off-Axis Guider • ST-i Color Autoguider and Planet Camera • 36mm LRGB Filter Set, 36mm H-alpha Filter	80-12064-00
STF-8300M Pro+ Package w/ST-i mono • STF-8300 Monochrome • FW5-8300 Filter Wheel • OAG-8300 Off-Axis Guider • ST-i Monochrome Autoguider and Planet Camera • 36mm LRGB Filter Set, 36mm Clear Filter • H-alpha, O-III, SII Filter Set	80-12065-00
STF-8300M Pro+ Package w/ST-i color • STF-8300 Monochrome • FW5-8300 Filter Wheel • OAG-8300 Off-Axis Guider • ST-i Color Autoguider and Planet Camera • 36mm LRGB Filter Set, 36mm Clear Filter • H-alpha, O-III, SII Filter Set	80-12066-00

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Santa Barbara Instrument Group, a division of Aplegen, Inc. | 147-A Castilian Drive, Goleta, CA 93117
 t 805.571.7244 | f 805.571.1147 | w www.sbig.com | e sbig@sbig.com

