

Model STT 1603 / 3200 / 8300

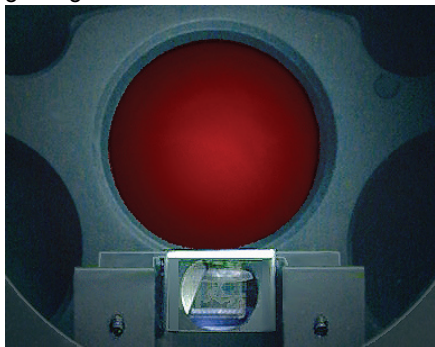
The new STT series cameras are SBIG's latest mid-sized cameras with unparalleled features and specifications, including:

- Ethernet and USB 2.0 Interface
- Built-in Web Server
- Low Noise 10MHz Readout (<1 sec downloads)
- High Precision 8-Position Filter Wheel
- Self-Guiding CCD in Front of Filters
- Even-Illumination Photometric Shutter
- 2-Stage Cooling Delta to -55C
- Liquid Cooling Ready
- Twin Variable Speed Fans
- MAR coated Sapphire Chamber Window
- Built-in Frost Detection System
- Built-in RBI Pre-Flash
- 12VDC Operation
- Internal Power Management System
- External Triggers In/Out
- Full Frame Image Buffer
- Remote Guide Head Option
- High Accuracy Temperature control
- User Rechargeable Desiccant Plug
- Internal Image Processing (User Selectable)
- Status, Power and Relay Indicators
- AO-8 Adaptive Optics Option

Many of these features are found only in the new STT series cameras.

Micron-Precision, Self-Guiding Filter Wheel

A new filter wheel design for the STT series sets it apart from other designs. The carousel holds eight 36mm filters and inserts are available for 1.25" and 31mm filters. Two new unique features make this an imager's delight: First, the design incorporates a self-guiding CCD in the filter wheel cover so that light from the guide



star is captured before passing through the filters. An optional filter wheel cover is available for wide angle imaging with Nikon or Canon 35mm camera lenses,

or for anyone who does not need or want the built-in self-guiding feature. Full sets of 36mm LRGB and Narrowband filters by Astrodon, Baader Planetarium and Astronomik are available for unvignetted imaging at any f/ratio. The second unique feature of the STT filter wheel is a positive centering mechanism that precisely re-positions and firmly holds filters in the same position over the CCD no matter how many times the carousel is moved. In our tests of the new design, the re-positioning of filters was accurate to

better than 5.4 microns after several complete rotations. This degree of precision means that flat fields taken after the filter has moved and returned are accurate to better than the level of a single pixel



STT-8300 Typical Specifications

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CCD	Kodak KAF-8300
Pixel Array	3326 x 2504
Pixel Size	5.4 x 5.4 microns square
CCD Size	17.96 x 13.52 mm
Total Pixels	8.3 Million
Full Well Capacity	~25,500 e-
Dark Current	0.02e-/p/s @ -10C
Antiblooming	1000X
Shutter	Even-Illumination, Mechanical
Exposure	0.12 to 3600 seconds
A/D Converter	16-bit
Gain	0.37e-/ADU
Read Noise	~9 e-
Binning Modes	1x1, 2x2, 3x3, 9x9, nx1
Digitization Rate	10 Megapixels / Second
Full Frame Download	Less than 1 second
Max Cooling Delta	-55 degrees C
Temp. Regulation	+/- 0.1 degree
Power	12VDC, 3.5 amps max
Interface	USB 2.0 and Ethernet
Computer Compatibility	Windows 32/64-bit, Mac OSX
Camera Body Size	4.9 x 4.9 x 2.9 in (124 x 124 x 74mm)
Mounting	T-thread, 2" Nosepiece
Weight	2.7 pounds (1.2 kg)
Backfocus	0.69 inches (17.5 mm)