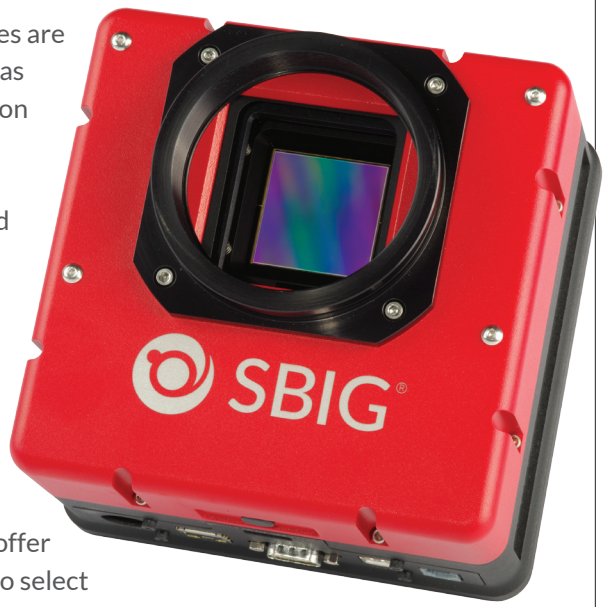
DIFFRACTION LIMITED

SBIG® STX AND STXL LARGE FORMAT CCD DETECTORS

LARGE FORMAT CCD CAMERAS



The SBIG STX and STXL CCD series are the perfect research-grade cameras for photometry or image acquisition and astrophotography with 0.3m to 1m telescopes. Their reliability, high dynamic range, low noise, and excellent thermoelectric cooling are ideal for many long-exposure applications in astronomical, optical, or physical sciences. These cameras are used by leading observatories, universities, and colleges.

The SBIG STX and STXL cameras offer a choice of sensors, allowing you to select the right pixel size and imaging array to match your application and budget. The STXL series feature rectangular sensors from 6.3 to 16.2 megapixels and use cost-effective 50mm round filters. The larger STX series are larger square sensors ranging from 9.3 to 16.8 megapixels and use 50mm square filters. Peak quantum efficiency (QE) ranges from 50 to 70% with front-illuminated sensors.

The proven STX and STXL camera design features field-upgradable firmware, low vibration fans for air-cooling, and a liquid cooling option for extended temperature ranges. Like most large SBIG cameras, the STX and STXL-series have an even-illumination electromechanical shutter for easy dark frames and precise exposure control.

FEATURES AND BENEFITS

The STX and STXL CCD series cameras feature:

Monochrome CCD sensor	High dynamic range and maximum resolution using 16-bit ADC
Even-Illumination Electromechanical shutter	Convenient dark and bias frames, ideal for robotic automation, and no strange artifacts caused by leaf shutter designs.
High performance thermal management	Thermoelectric Cooling ΔT >50°C below ambient using air or ΔT>60°C with liquid cooling assist. Sensors typically held at -35°C.
USB 2.0 interface, Ethernet	Supports longer cable lengths than USB 3.0
ST-4 guide port	Controls telescope mount for round stars, precise tracking
Auxiliary control port	External trigger and control of optional filter wheel, adaptive optics
SBIG universal drivers	Support for Window® 7 through 10, MacOS® 10.14, and Canonical® Ubuntu Linux 18.04 LTS.
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.

SBIG® IMAGING SYSTEMS

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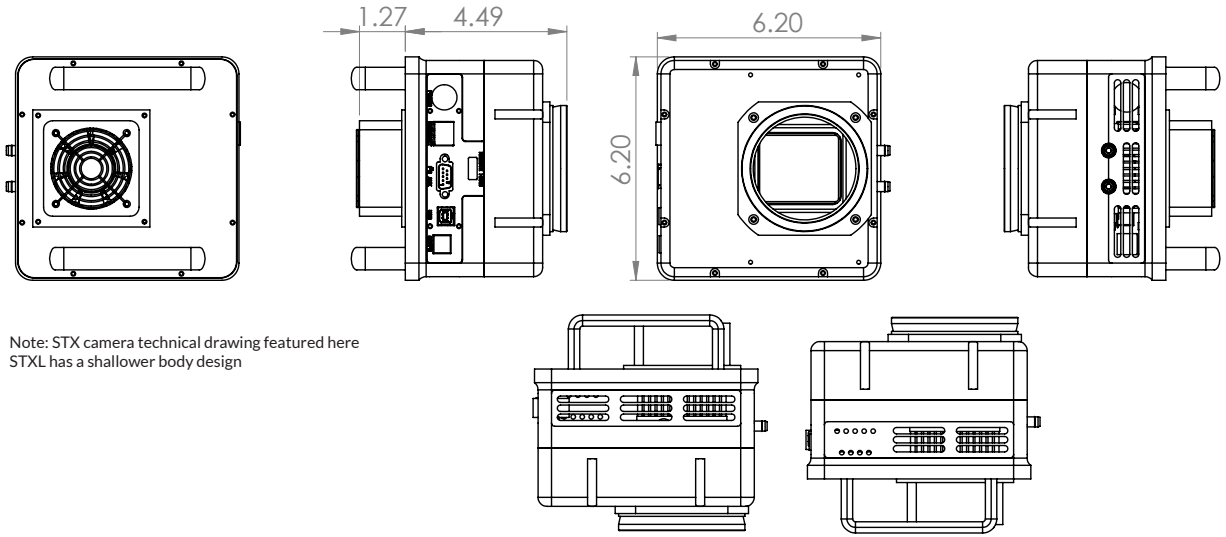
SBIG® STX AND STXL LARGE FORMAT CCD DETECTORS

TECHNICAL SPECIFICATIONS

SBIG model name	STX-16801	STX-16803	STX-9000	STXL-11002	STXL-16200	STXL-6303E
Sensor	KAF-16801	KAF-16803	KAF-09000	KAI-11002	KAF-16200	KAF-6303E
Illumination	Front, windowless	Front	Front	Front	Front	Front
Peak quantum efficiency	65%	60%	70%	50%	56%	68%
Sensor type	Full frame	Full frame	Full frame	Interline	Full frame	Full frame
Anti-blooming (N = best for photometry)	N	Y	Y	Y	Y	N
Active pixels	4096 x 4096	4096 x 4096	3056 x 3056	4008 x 2672	4500 x 3600	3072 x 048
Pixel size (µm)	9.0	9.0	12.0	9.0	6.0	9.0
Sensor dimensions (mm)	36.9 x 36.9	36.8 x 36.8	36.7 x 36.7	37.3 x 25.7	27.0 x 21.6	27.7 x 18.5
Sensor diagonal (mm)	52.2	52.0	51.9	45.3	34.6	33.3
Dark current (e-/p/s)	0.4	0.8	2.0	0.3	0.1	0.5
Full well capacity (e-)	100 000	100 000	110 000	60 000	41 000	100 000
Read noise (e-)	10	10	10	11	9	15
ADC resolution	16-bit	16-bit	16-bit	16-bit	16-bit	16-bit



Note: STX camera technical drawing featured here
STXL has a shallower body design

OPTIONAL ACCESSORIES

Adaptive optics unit:

AO-X voice coil actuated tip/tilt adaptive optics

Guiding camera:

SBIG StarChaser SC-3 off-axis guiding camera

MS-REMOTEHDSTT Remote Guide Head

Filter wheel:

FW7-STX with 7-position carousel, 50mm square slots

FW8S-STXL with 8-position carousel, 50mm round slots

Optical filters:

LRGB, Hα, OIII, SII.
Call regarding photometric filters.

Spare molecular desiccant cartridge:

STX: DESICCANT-STX-STL

STXL: DESICCANT-STXL

Mechanical adapters:

STX/STXL 3-inch dovetail mounting plate

STXL 2-inch nose plate tripod mount

CONTACT US

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