

Stingray. The Transformer Camera.



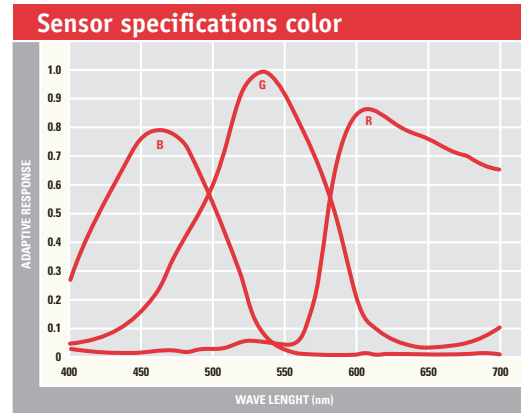
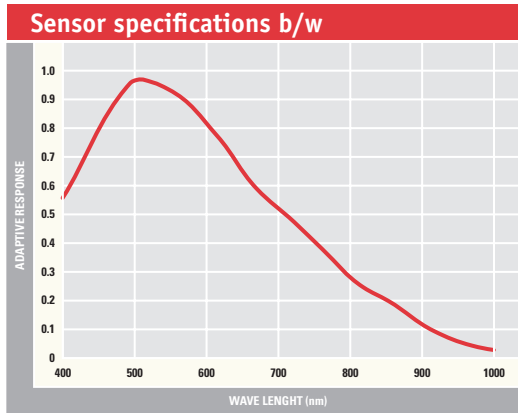
Description

The Stingray falls into the mid-range in terms of price, but offers a breadth of functions unrivaled in its class and an unbeatable price/performance ratio. The eight different versions are equipped with a fast FireWire IEEE1394b interface and high-end CCD sensors in color and monochrome, with resolutions from VGA up to 5 megapixels. To meet the highest requirements in the industry, the Stingray comes optionally in a version with a copper daisy chain connection or 1 x copper combined with 1 x GOF connector (2 x optical fiber on LCLC). The camera is loaded with typical AVT intelligent functions for image pre-processing, like lookup tables, shading corrections, white balance and 2 to 8x binning* for enhanced photosensitivity. Grabber functions, including an internal memory and deferred transport mode, make the Stingray ideal for multi-camera operations, while the sequence mode enables lightning-fast parameter changes. The Stingray is designed to be modular and flexible, offering a wide selection of lensmounts, sensors, case variations, interfaces and cable outputs, which can be flexibly configured using building- block principles.

* monochrome versions only

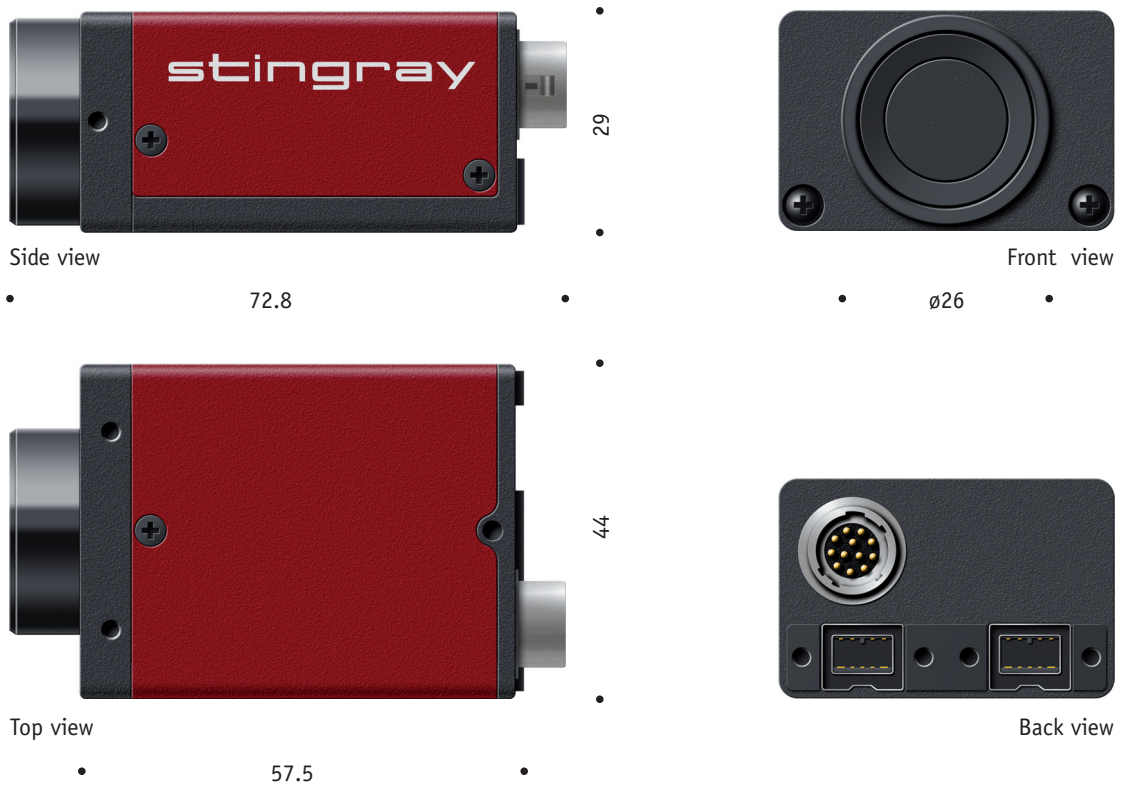
Highlights

- IEEE 1394b (S 800 daisy chain)
- 656 (H) X 492 (V)
- Up to 84 fps (full resolution)
- Progressive scan CCD, monochrome and color
- Image pre-processing features:
 - LUT
 - Real-time shading correction
 - High SNR mode
 - Hue, saturation
 - Color debayering
 - 2x ... 8x binning* / sub-sampling
 - Auto gain, exposure, white balance
 - And lots more ...
- Smart frame grabber features:
 - 32 MB on-board
 - Deferred image transport
 - Trigger delay
 - Multi-shot, mirror image
 - SIS (secure image signature)
 - Sequence mode, user sets
 - And lots more ...
- Industry proven and robust housing
- C-Mount / optional CS-Mount
- Angled head, board level version (on request), peltier cooling device (soon)
- Medical design on request



The sensor specifications are extracted from the data sheet of the sensor – excluding lens and filter.

Dimensions Scale 1:1



Resolution / frame rate	
AOI height / pixel	Frame rate / fps
492	84
480	86
320	122
240	152
120	246
60	366
30	476
10	593
2	640

Connections	
Pin	Signal
1	External GND
2	External Power (8...36 V DC)
3	GP Output 4
4	GP Input 1 (Default: Trigger)
5	GP Output 3 (Default: Busy)
6	GP Output 1 (Default: IntEna)
7	GP Input GND
8	RxD (RS-232)
9	TxD (RS-232)
10	GP Output Power(max. 36 V DC)
11	GP Input 2 (CMOS/TTL)
12	GP Output 2

Design and specification of the described product(s) are subject to change without notice.
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Camera specifications	
Image device	Type 1/2 (diag. 8 mm), progressive scan SONY CCD, ICX 414
Picture size	656 (H) x 492 (V)
Cell size	9.9 µm x 9.9 µm
Resolution depth	8 bit / 14 bit (16 bit in High SNR mode)
Lens mount	C-Mount / optional: CS-Mount
Digital interface	IEEE1394b, (I IDC V1.31) S 800 daisy chain
Transfer rate	100 Mbit/s, 200 Mbit/s, 400 Mbit/s, 800 Mbit/s
Frame rates	Up to 84 fps (full resolution)
Gain control	Manual: 0...24 dB, auto gain
Shutter speed	30 µs ... ~ 67 s, auto shutter
Image pre-processing	LUT; shading correction; High SNR mode; white balance; color interpolation (debayering); local color; anti aliasing; hue; saturation; sub-sampling; 2x - 8x binning (only b/w) or sub-sampling; separate reference AOI for auto features
Grabber features	32 MB on-board memory; deferred image transport; trigger delay; multi-shot; mirror image; several trigger modes; SIS (secure image signature); sequence mode; storable user sets
Power requirements	DC 8 V - 36 V; < 3.5 W @ 12 V
Dimensions	72.8 mm x 44 mm x 29 mm (L x W x H)
Mass	92 g (without lens)
Operating temperature	+ 5 ... + 45° Celsius
Storage temperature	- 10 ... + 60 ° Celsius
Regulations	CE, FCC Class B, RoHS (2002/95/EC)
Options	Angled head, board level version (on request), peltier cooling device (soon), cables, optical filters; medical design on request; AVT FirePackage / Active FirePackage / Fire4Linux