



## Stingray F-145

### Description

#### **Sony ICX285 ExView HAD sensor, 1394b**

The Stingray F-145B/C incorporates the popular Sony ICX285 ExView HAD sensor. In combination with the Stingray's image pre-processing functions like low-noise binning mode and High SNR mode, this camera produces clear and brilliant images even with very low light. At full resolution, it runs at 16 fps. Also available: Stingray F-145B/C-30 fps (monochrome).

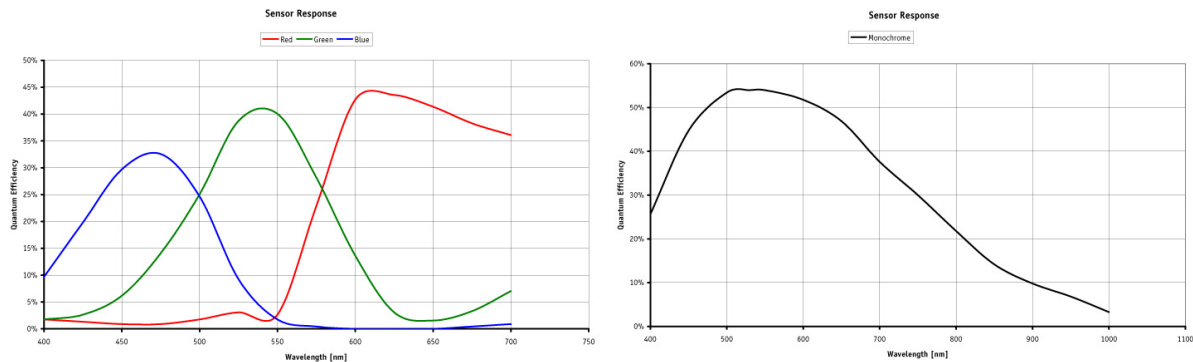
- Sony ICX285 ExView HAD CCD sensor
- Trigger
  - Programmable, trigger level control, single trigger, bulk trigger, programmable trigger delay
- Options
  - 1394b connectors: 2 x copper (daisy chain) or 1 x GOF, 1 x copper
  - Various IR cut/pass filters, removed cover glass
  - Various lens mounts on request
  - Hirose power: out
  - Angled head
  - White medical housing
  - Compact housing version
  - Board level versions on request

## Specifications

Stingray F-145	
Interface	IEEE 1394b - 800 Mb/s, 2 ports, daisy chain, fiber optic (GOF) optional
Resolution	1388 x 1038
Sensor	Sony ICX285
Type	CCD Progressive
Sensor Size	Type 2/3
Cell size	6.45 µm
Lens mount	C
Max frame rate at full resolution	16 fps
A/D	14 bit
On-board FIFO	32 MB
Output	
Bit depth	8-14 bit
Mono modes	Mono8, Mono12, Mono16
Color modes YUV	YUV411, YUV422
Color modes RGB	RGB8
Raw modes	Raw8, Raw12, Raw16
General purpose inputs/outputs (GPIOs)	
TTL I/Os	0
Opto-coupled I/Os	2 inputs, 4 outputs
RS-232	1
Power/Mass/Dimensions/Regulations	
Power requirements (DC)	8 V - 36 V
Power consumption (12 V)	<4 W
Mass	92 g
Body Dimensions (L x W x H in mm)	72.9 x 44 x 29 mm including connectors, w/o tripod and lens
Regulations	CE, FCC Class B, RoHS

Max frame rate for monochrome version: 30 fps

[Download Stingray technical drawing \(click here\)](#)



## Smart features

Stingray cameras include numerous real-time image pre-processing functions. All below mentioned functions are performed by the FPGA inside the camera – with no additional CPU load and thus an inexpensive host computer.

- AOI (true partial scan), separate AOI for auto features
- Programmable LUT, white balance, hue, saturation
- Debayering
- Gain
  - Auto/manual
  - Manual gain control: 0 - 24.4 dB
- Exposure
  - Auto/manual
  - Exposure time: 74  $\mu$ s - 67 s
- Color correction
- Shading correction
- High SNR mode (up to 24 dB better signal-to-noise ratio)
- Local color anti-aliasing
- Sub-sampling, 2x – 8x binning (b/w)
- Low noise binning mode
- Defect pixel correction
- Sequence mode (changes the camera settings on the fly)
- Image mirror
- Deferred image transport
- SIS (secure image signature, time stamp for trigger, frame count etc.)
- Storable user settings

The Technical Manual of the Stingray contains detailed descriptions of all functions.

## Applications

Thanks to the ExView HAD Sony ICX285 sensor and especially the High SNR mode, defect pixel correction and low-noise binning mode, Stingray F-145B/C cameras are the perfect choice for low-light applications in:

- Industrial inspection and automation
- Logistics
- Science and research
- Healthcare and medical (light grey housing available)
- Solar cell inspection
- LCD panel inspection
- Multimedia and entertainment
- ITS (Intelligent traffic solutions)
- ... and many more

Additionally, it is ideally suited for:

- Demanding OEM camera applications (board level versions with separate sensor board available on request)
- Daisy chaining (two copper connectors)
- Long cables - 400 meters and more without additional repeaters (fiber version)