

## Stingray F-146



### Description

#### Digital machine vision camera - FireWire - Sony ICX267

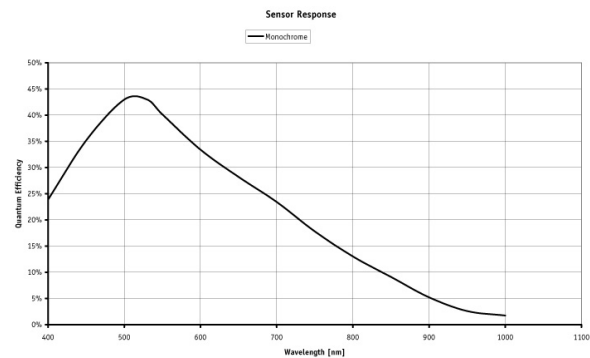
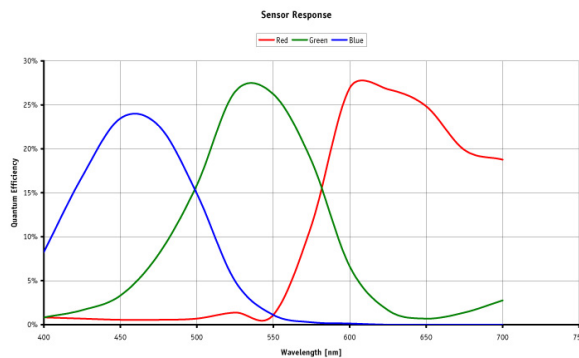
The Stingray F-146B/C is equipped with a SONY HAD CCD sensor (ICX267). At full resolution, this digital machine vision camera runs at 15 fps. Higher frame rates can be reached by a smaller AOI, binning (b/w) or sub-sampling.

- Sony ICX267
- 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

<b>Stingray</b>		<b>F-146</b>	
<b>Interface</b>	IEEE 1394b - 800 Mb/s, 2 ports, daisy chain, fiber optic (GOF) optional		
<b>Resolution</b>	1388 x 1038		
<b>Sensor</b>	Sony ICX267		
<b>Type</b>	CCD Progressive		
<b>Sensor Size</b>	Type 1/2		
<b>Cell size</b>	4.65 µm		
<b>Lens mount</b>	C		
<b>Max frame rate at full resolution</b>	15 fps		
<b>A/D</b>	14 bit		
<b>On-board FIFO</b>	32 MB		
<b>Output</b>			
<b>Bit depth</b>	8-14 bit		
<b>Mono modes</b>	Mono8, Mono12, Mono16		
<b>Color modes YUV</b>	YUV411, YUV422		
<b>Color modes RGB</b>	RGB8		
<b>Raw modes</b>	Raw8, Raw12, Raw16		
<b>General purpose inputs/outputs (GPIOs)</b>			
<b>TTL I/Os</b>	0		
<b>Opto-coupled I/Os</b>	2 inputs, 4 outputs		
<b>RS-232</b>	1		
<b>Power/Mass/Dimensions/Regulations</b>			
<b>Power requirements (DC)</b>	8 V - 36 V		
<b>Power consumption (12 V)</b>	<4 W		
<b>Mass</b>	92 g		
<b>Body Dimensions (L x W x H in mm)</b>	72.9 x 44 x 29 mm including connectors, w/o tripod and lens		
<b>Regulations</b>	CE, FCC Class B, RoHS		

[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: 39  $\mu$ 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

The Stingray F-146 digital machine vision cameras fit many applications, their flexibility is a benefit of all Stingray FireWire cameras. AVT recommends using this camera for:

- Industrial inspection and automation
- Logistics
- Science and research
- Healthcare and medical (white housing available)
- Multimedia, entertainment and sports
- 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 chain applications (two copper connectors)
- Long cables - 400 meters and more without additional repeaters (Stingray F-146B/C fiber version)