

Stingray F-033



Description

High-quality (mid-priced) industrial VGA camera with image pre-processing

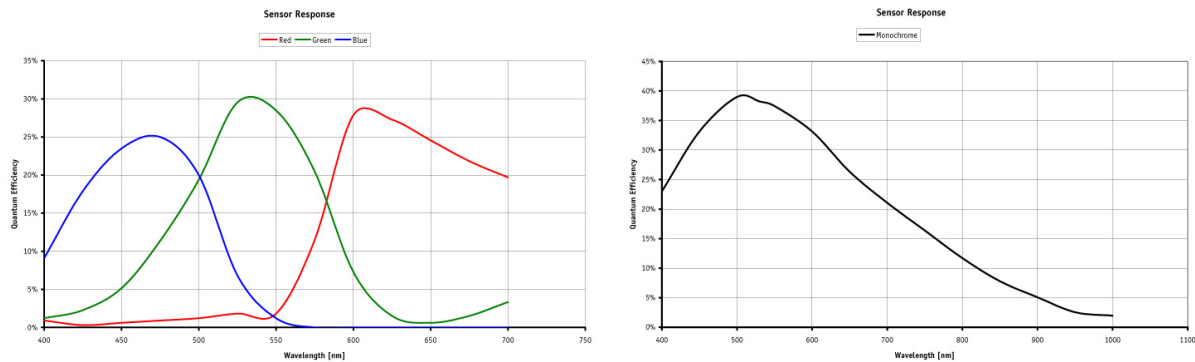
The Stingray F-033B/C is a high-quality VGA camera. It is equipped with a sensitive Sony CCD sensor and includes many image pre-processing functions. At full resolution, it runs at 84 fps. Higher frame rates can be reached by a smaller AOI, binning (b/w) or sub-sampling.

- Sony ICX414
- 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
 - Various lens mounts on request
 - Hirose power: out
 - Angled head
 - White medical housing
 - Compact housing version
 - Board level versions on request

Specifications

Stingray		F-033	
Interface	IEEE 1394b - 800 Mb/s, 2 ports, daisy chain, fiber optic (GOF) optional		
Resolution	656 x 492		
Sensor	Sony ICX414		
Type	CCD Progressive		
Sensor Size	Type 1/2		
Cell size	9.9 µm		
Lens mount	C		
Max frame rate at full resolution	84 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		

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



Smart features

Stingray cameras include many 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: 31 μ 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-033B/C is a high-quality industrial VGA camera with many image pre-processing functions. It offers several opportunities for customization. This mid-priced camera fits for all sorts of applications with high demands, for example:

- Industrial inspection and automation
- Semiconductor inspection
- Logistics
- Science and research
- Healthcare and medical (light gray housing available)
- Ophthalmology
- Multimedia, entertainment and sports
- ITS (Intelligent traffic solutions)

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 (GOF version Stingray F-033B/C fiber)