



Stingray

F-033



- Versatile VGA camera
- Advanced feature set
- Many variants
- Excellent image quality

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

The Stingray F-033B/F-033C is a high-quality VGA camera. It is equipped with a sensitive Sony ICX414 CCD sensor and includes many image pre-processing functions. At full resolution, it runs at 84 frames per second. Higher frame rates can be reached by using a smaller area of interest (AOI), binning (b/w) or sub-sampling.

Options:

- IEEE 1394b connectors: 2 x copper (daisy chain), Hirose power: out
- Various IR cut/pass filters, various lens mounts
- Angled head, board level version, white medical housing

Specifications

Stingray	F-033
Interface	IEEE 1394b - 800 Mb/s, 2 ports, daisy chain
Resolution	656 (H) × 492 (V)
Sensor	Sony ICX414
Sensor type	CCD Progressive
Sensor size	Type 1/2
Pixel size	9.9 μm × 9.9 μm
Lens mount (default)	C-Mount
Max. frame rate at full resolution	84 fps
ADC	14 bit
Image buffer (RAM)	Up to 128 MByte

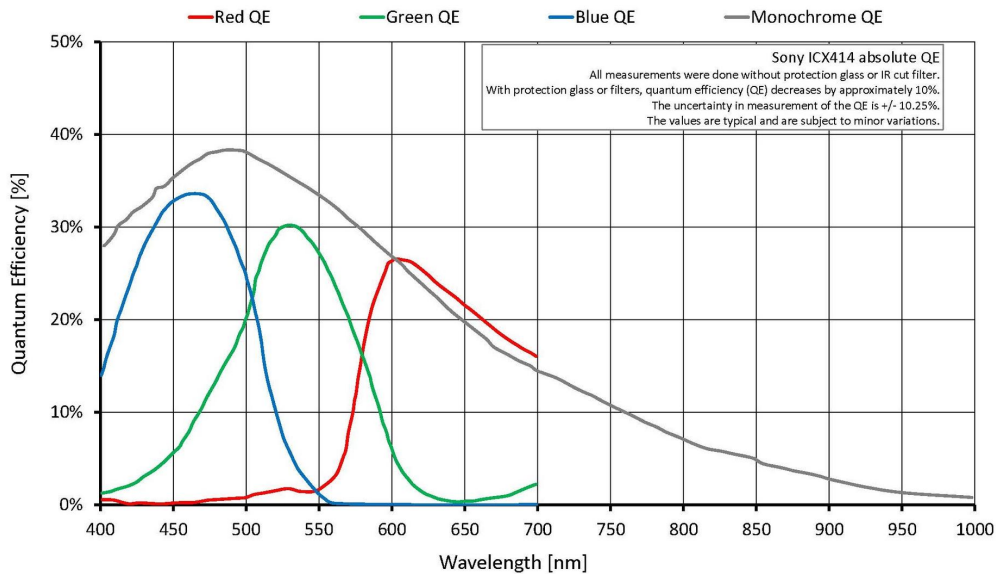
Imaging performance

Stingray

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Imaging performance data is based on the evaluation methods in the EMVA 1288 Release 3.1 standard for characterization of image sensors and cameras. Measurements are typical values for monochrome models measured at full resolution without optical filter. Contact Sales or AE for more information.

Quantum efficiency at 529 nm	38 %
Temporal dark noise	22.0 e ⁻
Saturation capacity	25300 e ⁻
Dynamic range	61.0 dB
Absolute sensitivity threshold	22.5 e ⁻
Output	
Bit depth	8-14 Bit
Monochrome pixel formats	Mono8, Mono12, Mono16
RGB color pixel formats	RGB8
Raw pixel formats	Raw8, Raw12, Raw16
General purpose inputs/outputs (GPIOs)	
Opto-isolated I/Os	2 inputs, 4 outputs
RS232	1
Operating conditions/dimensions	
Operating temperature	+5 °C to +45 °C
Power requirements (DC)	8 V to 36 V
Power consumption	<4 W (@ 12 VDC)
Mass	92 g
Body dimensions (L × W × H in mm)	72.9 × 44 × 29 (including connectors)
Regulations	CE: 2014/30/EU (EMC), 2011/65/EU, including amendment 2015/863/EU (RoHS); FCC Class B



Features

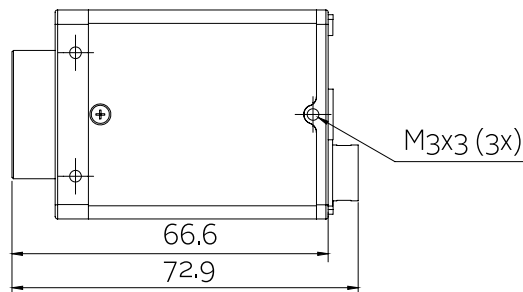
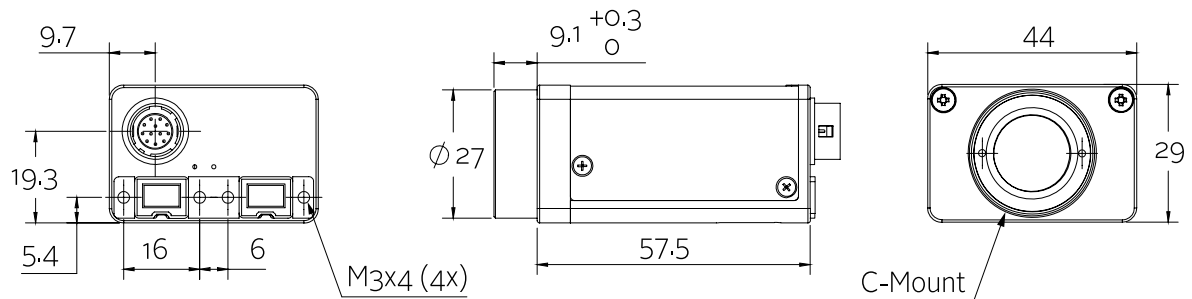
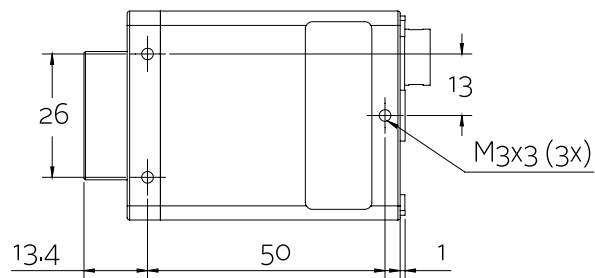
- High SNR mode (up to 24 dB better signal-to-noise ratio)
- Low-noise binning mode
- Shading correction
- Defect pixel correction
- Area of interest (AOI), separate AOI for auto features
- Binning
- Decimation
- Auto gain (manual gain control: 0 to 24.4 dB)
- Auto exposure (31 μ s to 67 s)
- Auto white balance
- Look-up table (LUT)
- Hue, saturation
- Color correction
- Local color anti-aliasing
- Reverse X/Y
- Deferred image transport
- Trigger programmable, level, single, bulk, programmable delay
- Sequence mode (changes the camera settings on the fly)
- SIS (secure image signature, time stamp for trigger, frame count etc.)
- Storable user sets

Scope of delivery

- Camera and IEEE 1394b cable (other configurations on request)

Technical drawing

2 x 1394b copper





Applications

The Stingray F-033B/F-033C 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 (white housing available)
- Ophthalmology
- Multimedia, entertainment and sports
- Intelligent traffic solutions (ITS)

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)