



Iron 253

Iron

Small Form Factor Ruggedized Camera

Innovative Approach

Iron is high speed low-cost low-power global shutter CMOS camera with CoaXPress 12G, SDI 12G or Fiber 10G interfaces which supports 12.37 MP high quality video at rates up to 68fps.

Intelligent Design

Camera incorporates Sony Pregius IMX253 global shutter sensor with $3.45\mu\text{m}$ pixel size. With compact outline and low power design this camera can be fitted into tight spaces. Superior sensor performance allows very low light vision capabilities.

Key Features:

- 12.37 Megapixel up to 68 fps
- Monochrome and Color models
- Up to 3W power at full rate
- Full image processing feature set
- Pan/Tilt alignment of the sensor
- 6.25 Gbps CoaXPress 1.2
- 12 Gbps CoaXPress 2.0
- 10 Gbps fiber optic interface
- 12 Gbps SDI
- C mount / CS mount
- Full EMVA1288 report
- Full built-in self-test (BIT)
- Full built-in voltage testing
- Customization as per user requirements

Applications:

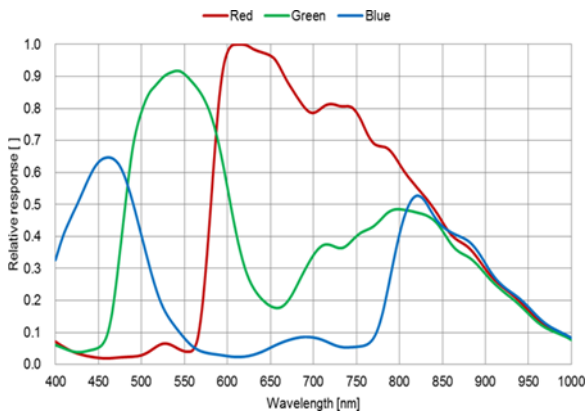
- Perimeter vision
- Military/Defense systems
- 3D
- Low light surveillance
- Special Effects
- VR

Technical Data (More detailed specifications are available on request)

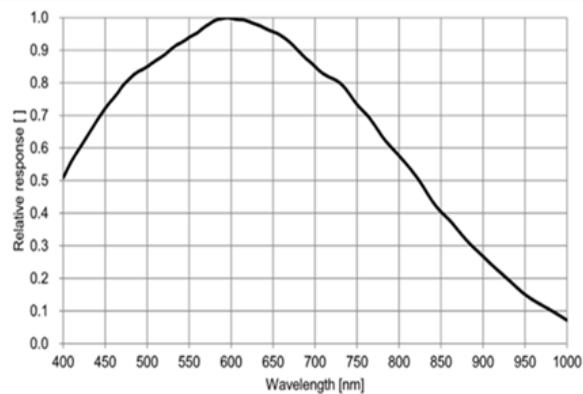
Pixel size	3.45 μm
Resolution	4096 (H) x 3000 (V)
Sensor size	17.6 mm
Sensor	Sony Pregius IMX253
Video output	CoaXPress up to 12 Gbps, SDI 12G, Fiber 10Gbps
Frame rate	68.3 fps @ 8bit resolution 64.6 fps @ 10bit resolution 46.4 fps @ 12bit resolution
Sensor positioning	Full pan/tilt calibration for optical axes
Dimensions (open-frame)	41x41x24 mm (including lens mount)
Dimensions (closed-frame)	43x43x24 mm (including lens mount)
Electronic shutter	Global shutter
Interface Connector	Micro-BNC
Temporal Noise	2 e ⁻ @ 25C
Full Well Charge	10555 e
Dynamic range	71dB
Signal-to-Noise Ratio (SNR max)	40.23 dB
Quantum Efficiency (QE) X FF	72% @ 525nm
Shortest Exposure	10us
Image acquisition	Continuous / Triggered
Output resolution	8, 10 or 12 bit
Monochrome/ color	Monochrome / Color
Power input	PoCXP full support (7-28V with external power option)
Weight (without lens)	<100g
Power consumption	<3W @ 24V DC
Operating temperature	- 30 C to 70 C
Lens mount	C-mount, CS-mount
Shock/Vibration	MIL 810
Ingress protection	IP67 (with protective lens tube)
On camera processing	Defect pixel correction
	White balance
	ROI
	Image flip
	Frame counter
	Flat field / Fixed patten noise correction
	LUT
	Gain (Analog / Digital)
Auto black level	

Absolute Quantum Efficiency

Color Spectral Response Sony IMX 253



Mono Spectral Response Sony IMX 253



Compatibility

Supported vision standard



Supported operating systems



Supported vision libraries



Compatible with most popular machine vision libraries

KAYA Instrument strives to create and maintain compatibility and interfaces for the most common and advanced vision image processing libraries and applications. Major support is available for **MVTec Halcon**, **National Instruments LabVIEW** and **MathWorksMATLAB**. Please check our KAYA website for an up-to-date list of other supported libraries and software package.

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