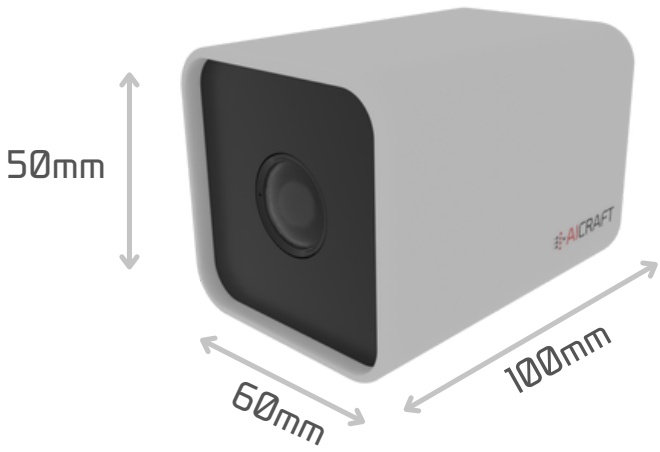
SMART CAMERA

PIXIA BLUE

AICRAFT



Key features

- → **Compact, lightweight and robust**
- → **5MP resolution monochrome or colour**
- → **2/3" global shutter CMOS sensor**
- → **8 TOPS peak AI performance (up to 16 TOPS)**
- → **High precision real-time clock**
- → **USB-C 3.1 and 1GigE interfaces**
- → **IP67 rated and vibration dampened**
- → **ONVIF® compliant with MQTT & RTSP protocols**
- → **Supports GenICam™ and USB3 Vision™ standards**

USB3 VISION

GENICAM

ONVIF®

Product description

Introducing a world-leading lightweight, visible-band, low-power smart camera with built-in Artificial Intelligence (AI) capability.

The innovation lies in the unique combination of 8/16 trillion-operation-per-second (8/16 TOPS) AI processing capacity with the lowest power and small form factor ratio. Additionally, the ease of programming enables quick code deployment without lengthy development time as for FPGAs.

The Linux operating system, combined with the multi-core processor and dedicated neural technology, empowers users to install custom drivers and third-party libraries, run both conventional algorithms and neural networks seamlessly to strike a balance for best application performance.

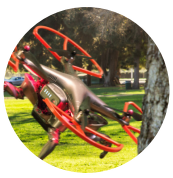
Product application examples

Search & Rescue

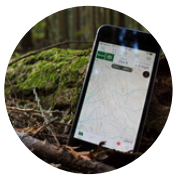
Maritime Surveillance

Perimeter Security

Road Safety



Collision Avoidance



GPS-denied Navigation

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Technical specifications

Sensor	Sony IMX250 Global Shutter
Resolution	2448 (H) x 2048 (V)
Field of View	29.7^0 (H) x 25.0^0 (V)
Lens	16mm (customisable)
Frame rate	79.1fps
Pixel size	3.45µm × 3.45 µm
Pixel bit depth	8bit, 10bit
Spectrum	Monochrome / Colour
Exposure time	1µs ~1s
Storage	64GB SSD (up to 2TB)
Interfaces	USB 3.1, 1GigE
Weight	300g

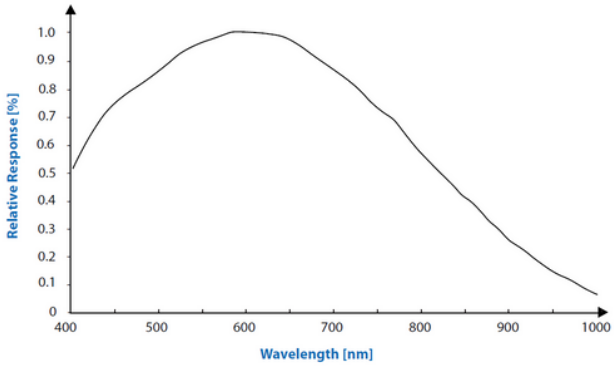
Electrical specifications

Nominal voltage	5VDC
Power supply	USB-C / PoE
Power consumption	10W
CE	Compliant

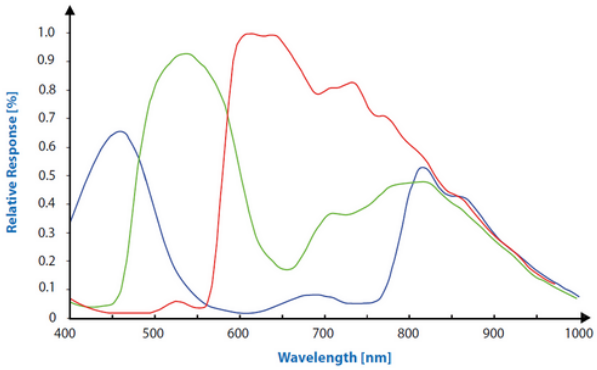
Environmental specifications

Operating temperature	0°C ~ +45°C
Storage temperature	-20°C ~ +70°C
Operating humidity	10% ~ 80%
RoHS	Compliant

Spectral response



Pixia Blue (monochrome)



Pixia Blue (colour)

Camera configurations

- → Programmable ROI, increased frame rate with partial scan
- → Automatic or programmable gain*, exposure* and white balance
- → Three acquisition modes: Single frame / Continuous / Software trigger
- → Pixel formats: Mono8, Mono10, BayerRG8, BayerRG10
- → Supports decimation, binning, reverse X/Y, digital shift and black level setting
- → Adjustable gamma for optimising the brightness of images
- → Colour models support light source preset, colour transformation control and saturation
- → Supports noise reduction and sharpness*
- → Configurable parameter limit to expand the range of gain, exposure, white balance.

** Only for monochrome camera model.*

Software compatibility

- → Optimised software package for 32/64bit Windows, Linux, ARMv7 and ARMv8
- → Supports 3rd-party software such as HALCON, MERLIC and LabVIEW
- → Multiple sample codes and easy-to-integrate SDKs for various programming tools
- → Supports leading-edge frameworks such as TensorFlow, PyTorch, Keras, Caffe2, ONNX, etc.

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