KAYA INSTRUMENTS

JetCam 19

JetCam 19
Super Speed,
POV Camera

Innovative Approach

JetCam 19 is a high speed, low-cost, global shutter CMOS camera with Fiber or CoaXPress interfaces which supports full HD (1920×1080) high quality video at rates up to 2360fps.

Intelligent Design

The Camera incorporates a 10 µm global shutter sensor and a direct lens control (optional) without need of external devices. With compact outline and low power design this camera can be fitted into tight spaces. The 3G SDI output enables connection of local monitor as viewfinder or an installation aid.

Applications:

- Slow Motion
- 3D Applications
- Sports judgement
- Broadcasting
- Sport analytics
- Special effects

Key Features:

- 2.1 Megapixel up to 2360 fps
- 40 Gbps fiber optic interface
- 25 Gbps CoaXPress
- Up to 10 km cable length
- 3G SDI output for local monitoring
- Wide variety of supported lens mounts
- B4 2/3" mount with integrated lens control*
- Compatible with KAYA Vision Point™ SDK
- Compatible with KAYA Komodo™ Frame Grabbers
- Customization as per user requirements
  * Lens control is optional

Technical Data

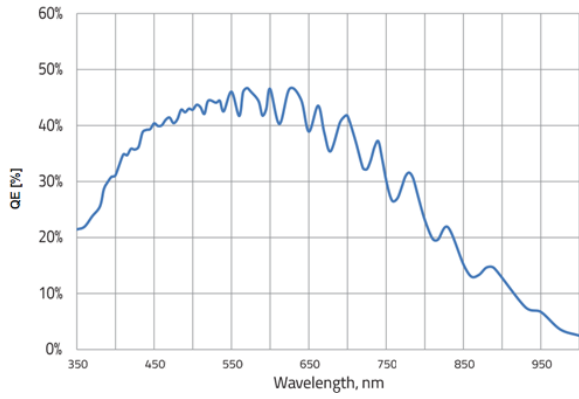| Feature	Description		
Pixel Size	10 µm x 10 µm		
Resolution	1920 (H) x 1080 (V)		
Optical Format	4/3''		
Sensor	LUX19HS		
Video Output	CLHS up to 40 Gbps for QSFP+		
	CLHS up to 20 Gbps for Dual SFP+		
	CoaXPress up to 25Gbps (optional)		
	10GiGE up to 10Gbps (optional)		
Complimentary Video Output	3G SDI		
Output Resolution	8 or 10 bit		
Max Frame Rate	2360 fps @8 bit resolution		
	1890 fps @10 bit resolution		
Image Acquisition	Continuous / Triggered		
Electronic Shutter	Global shutter		
Monochrome/ Color	Monochrome / Color		
Responsivity	20V/Lux's @ 550nm		
Temporal Noise	< 17.9 e$^-$		
Full Well Charge	12000 e$^-$		
Dynamic Range	> 56.1 dB @ 520 nm		
Signal-to-Noise Ratio (SNR Max)	41 dB @ 520 nm		
Quantum Efficiency (QE) X FF	54.275% @ 520 nm		
DSNU	< 32.8 e- (2.26 LSB10)		
PRNU	< 2.5% rms		
Shortest Exposure	1.5 µs		
Programmable I/O	2x RS232 (RS485 optional)		
On Camera Processing	▪ Defect pixel correction	▪ Auto/Manual White balance	
	▪ ROI	▪ Image flip	
	▪ Frame counter	▪ Flat field correction	
	▪ LUT	▪ Gain (Analog/Digital)	
	▪ Auto black level	▪ Nonvolatile storage	
Lens Control (Optional)	▪ Fujinon lens control		
	▪ Custom lens control through RS232/RS485		
	▪ Birger lens control		

Mechanical & Electrical

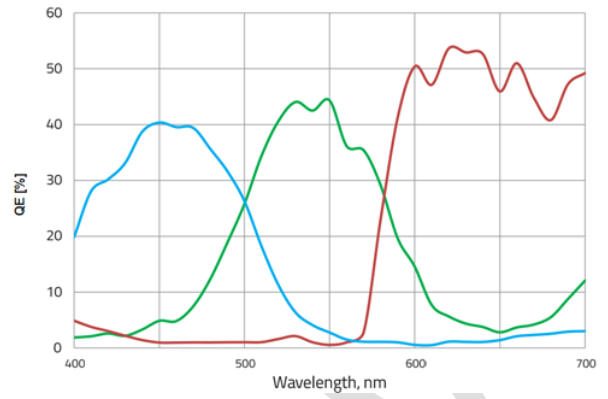| Feature	Description
Dimensions (including lens mount)	61.8 mm x 62.4 mm x 157 mm (Height x Width x Depth)
Lens Mount	F-Mount, B4, C-mount, Canon EF-mount, Birger EF-mount, PL mount
Weight (without Lens)	~1260g
Power Input	12 VDC (optional 24 VDC)
Power Consumption	< 16W
Operating Temperature	-10 °C to 50 °C, 10-90% humidity (non-condensing)
Storage Temperature	-10 °C to 55 °C, 10-90% humidity (non-condensing)

* KAYA Instruments reserves the right to update the data sheet from time to time without prior notice.

Quantum Efficiency

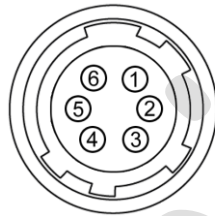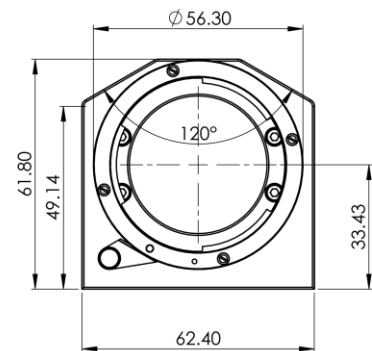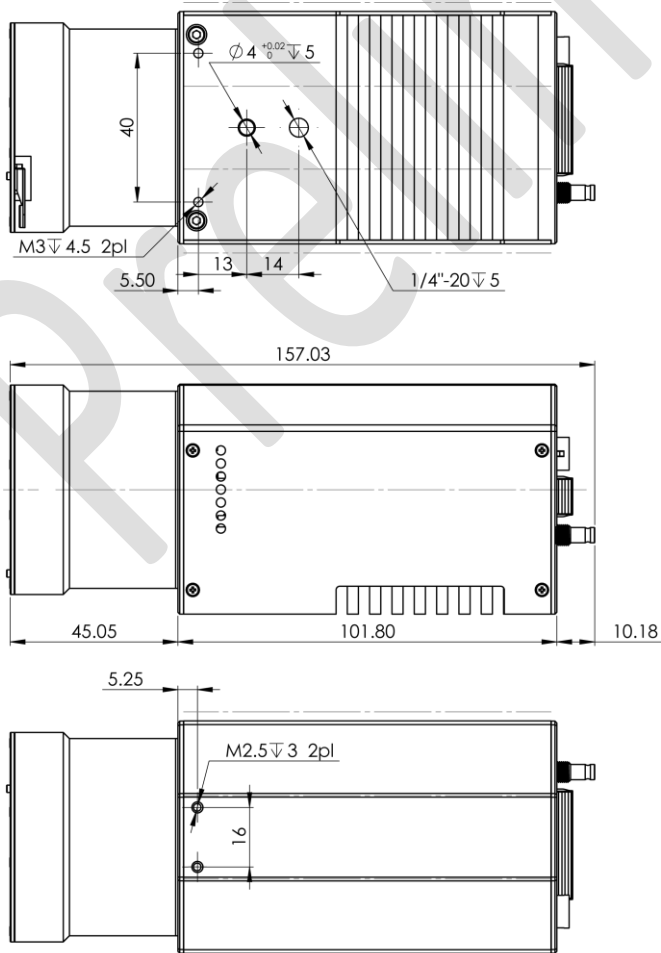### QE of LUX19HS – Monocolor

QE of LUX19HS – Color
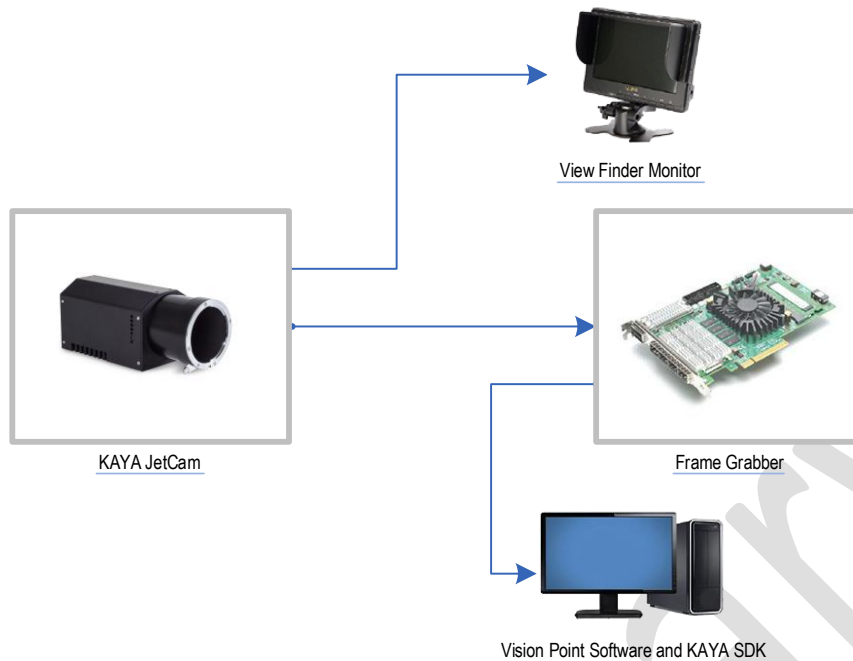

General Purpose Input Output

GPIO Pinout – 6 Pin Connector

1. Ground
2. RS232 TXI
3. R232 RXI
4. R232 TX2
5. RS232 RX2
6. 12V (Output)

Mechanical Drawings

KAYA High Speed Camera Workflow

View Finder Monitor

KAYA JetCam

Frame Grabber

Vision Point Software and KAYA SDK

Compatibility

KAYA Instruments creates and maintains 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 **MathWorks' MATLAB**.

❖ Supported vision standards:

CoaXPress® **GEN‹i›CAM** TRANSPORT LAYER **IO GiGE** VISION **GEN TL**

❖ Supported vision libraries:

HALCON a product of MVTec OpenCV NATIONAL INSTRUMENTS **LabVIEW**™ MATLAB **COGNEX**

❖ Supported operating systems:

Windows **Linux**

Please check our website for an up-to-date list of other supported libraries and software package