



JetCam160

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High Speed, POV Camera

Innovative Approach

JetCam160 is a high speed, low-cost, global shutter CMOS camera with a CLHS interface which supports 16 Megapixels (4704x3416) high quality video at rates up to 228fps.

Intelligent Design

The camera incorporates a 3.9µm global shutter sensor and a direct lens control (optional) without need of external devices. With a 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:

- High speed machine vision
- Motion analysis
- Sports broadcasting
- Traffic control
- Industrial inspection markets

Key Features:

- 16 Megapixel up to 228 fps
 - 40 Gbps fiber optic interface
 - 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 Dize	3.9 μm x 3.9 μm 5T shutter pixel with CDS
Resolution	4704 (H) x 3416 (V)
Sensor Dize	4/3"
Sensor	LUX160
Video Output	CLHS up to 40 Gbps for QSFP+ CLHS up to 20 Gbps for Dual SFP+ 10GiGE up to 10Gbps (optional)
Complimentary video output	3G SDI
Output resolution	8 or 10 bit
Max Frame rate	228 fps @8 bit resolution 214 fps @10 bit resolution
Image Acquisition	Continuous / Triggered
Electronic Shutter	Global shutter
Monochrome/ Color	Monochrome / Color
Conversion Gain	0.11 LSB10/e ⁻
Temporal Noise	20.7 e ⁻
Full Well Charge	7000 e ⁻
Dynamic Range	50.3dB @ 520 nm
Signal-to-Noise Ratio (SNR max)	38.4dB @ 520 nm
Quantum Efficiency (QE) X FF	48% @ 520 nm
DSNU	< 29.4 e ⁻ (3.3 LSB10)
PRNU	< 1.6%
Shortest Exposure	1.5 μs
Programmable I/O	2x RS232 (RS485 optional)
On camera processing	<ul style="list-style-type: none"> Defect pixel correction ROI Frame counter LUT Auto black level White balance Image flip Flat field correction Gain (Analog/Digital) Nonvolatile storage
Lens control (Optional)	<ul style="list-style-type: none"> Fujinon lens control Custom lens control through RS232/RS485 Birger lens control

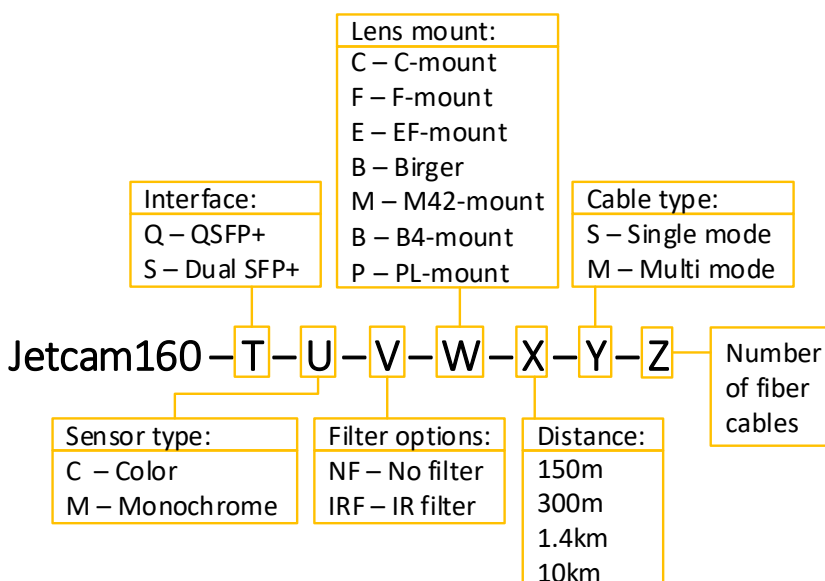
Mechanical & Electrical

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.

Ordering Information

KAYA's Part Numbers are intuitive and derived directly from the product's properties. Each index represents a different property of the camera, according to the following diagram:

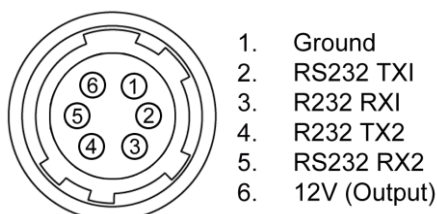


Product Name	Product Part Number
Power supply	KY-PWR12
2m SDI cable	KY-CCA-001-002.0
Switchcraft Inc PWR connector (M)	TB3M
Switchcraft Inc. Opposite PWR (F)	TA3FX
QSFP+ Multi Mode 150m	KY-QSFP-40G85-1M
QSFP+ Single mode 1.4km	KY-QSFP-40G31-1.4
SFP+ Single Mode 10km	KY-SFP-10GLR-31
SFP+ Multi mode 300m	KY-SFP-10G85-3M
Single Mode Patch cable Duplex with LC termination	KY-FCA-D-SM-LC-LC-2.0
Single Mode 8 cores cable with MTP/MPO termination	KY-FCA-Q-SM-5.0
Multi Mode Patch cable Duplex with LC termination	KY-FCA-D-MM-LC-LC-50.0
Multi Mode 8 cores cable with MTP/MPO termination	KY-FCA-Q-MM-4.0

Please contact a sales representative over at info@kayainstruments.com for a full list of peripherals including cables and frame grabbers.

General Purpose Input Output

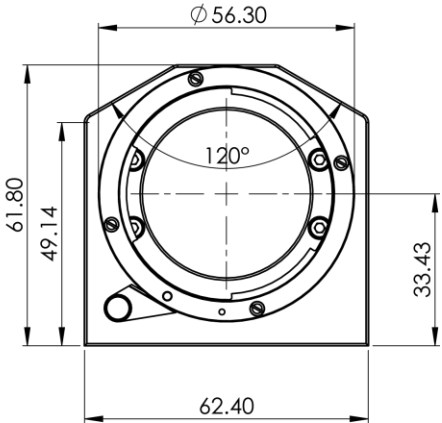
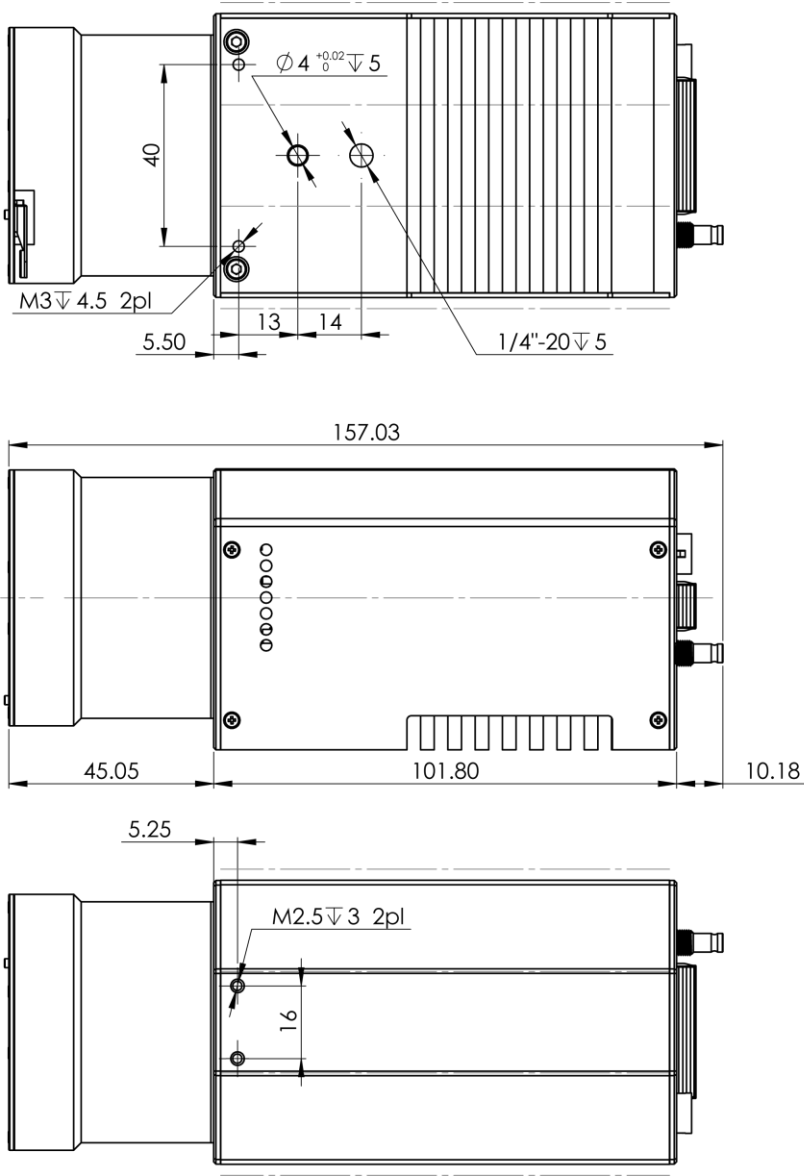
GPIO Pinout – 6 Pin Connector



The GPIO connector used on the camera is a 6 pin female Hirose connector. It is recommended to use a cable with a matching Hirose 6 pin male connector. Hirose's manufacturer's part number is listed below:

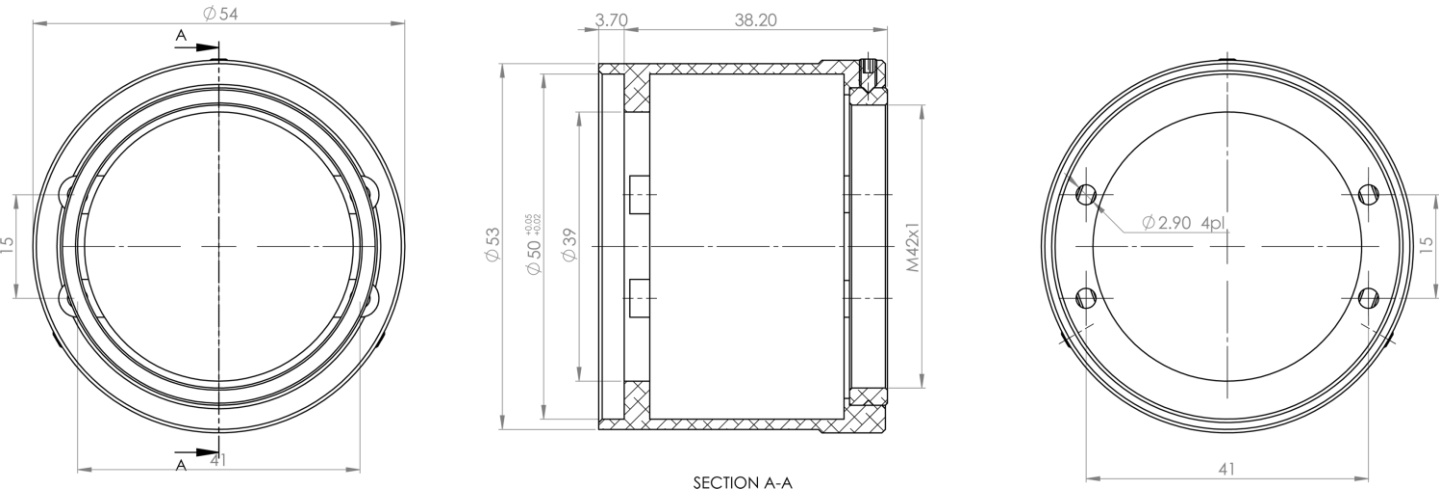
Product Name	Product Part Number
Hirose 6P connector, female	HR10-7R-6S(73)
Hirose 6P connector, male	HR10-7P-6P(73)

Mechanical Drawings

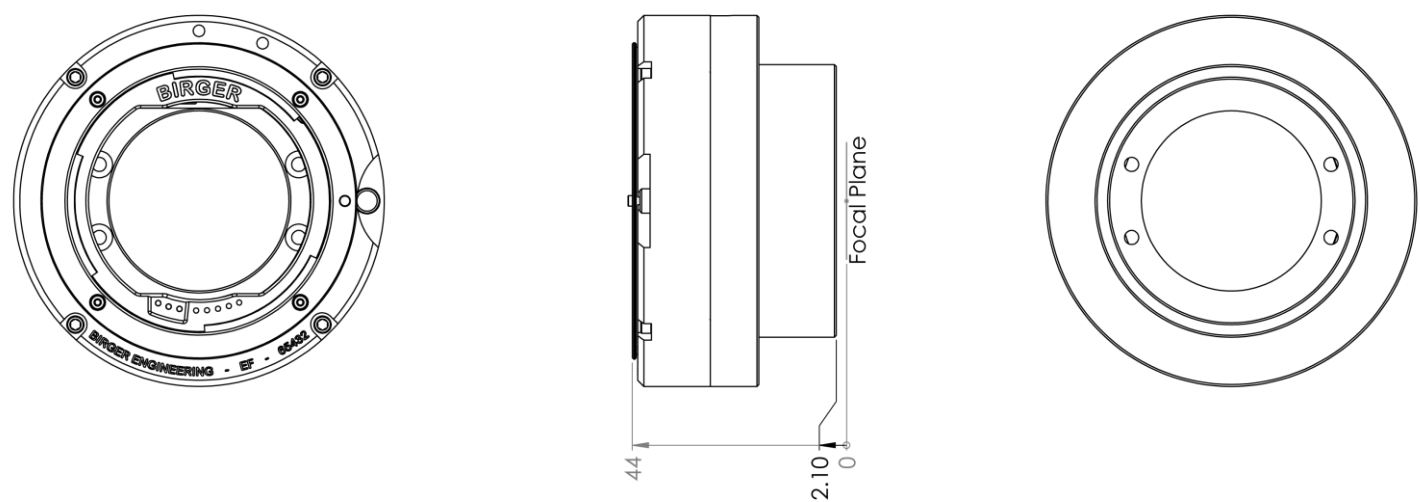


Lens Mounts Mechanical Drawings

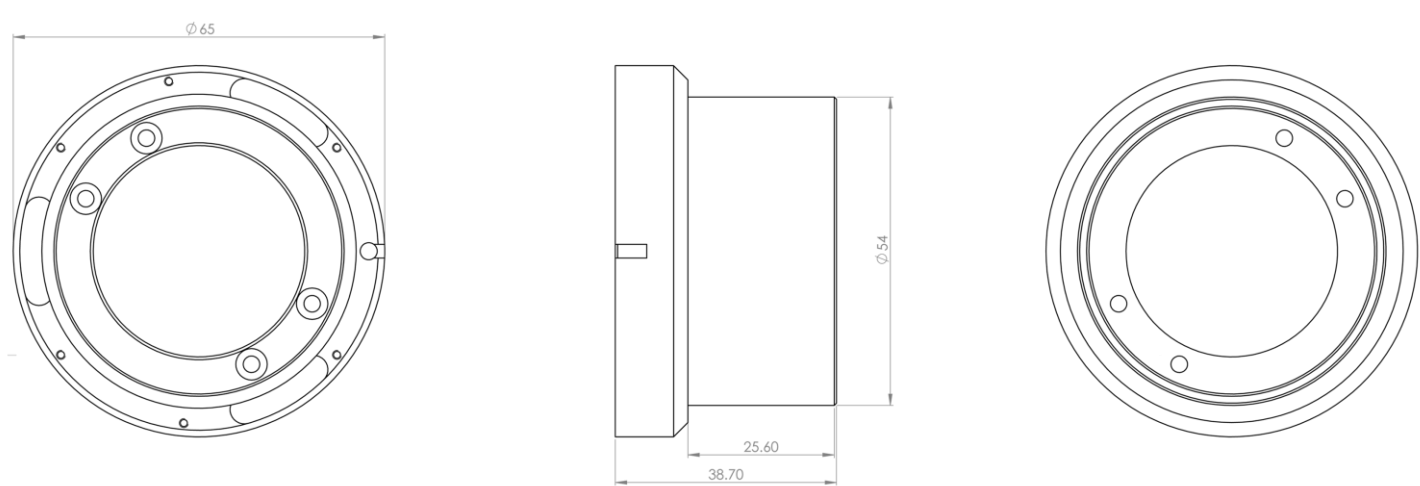
Nikon F mount:



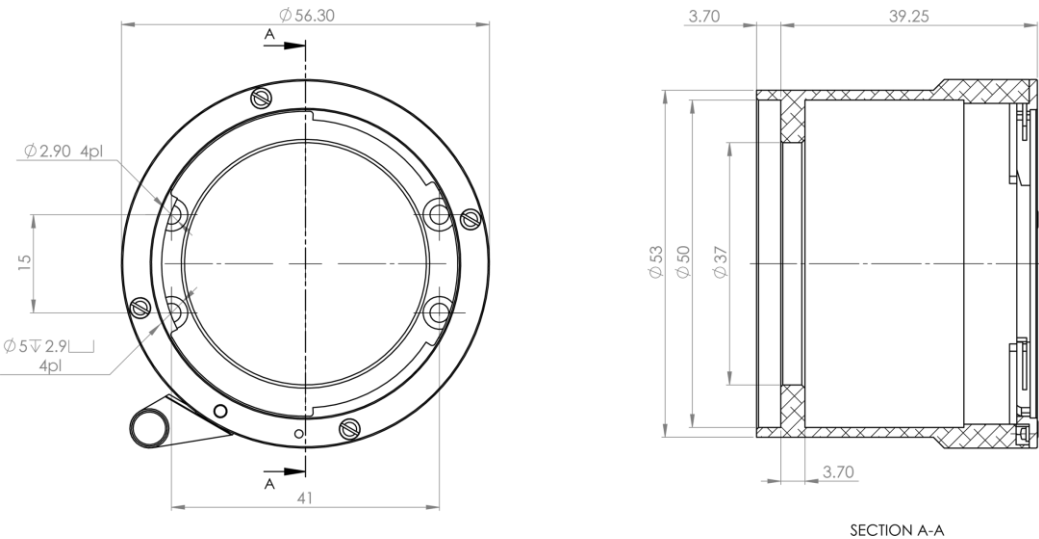
Birger EF mount:



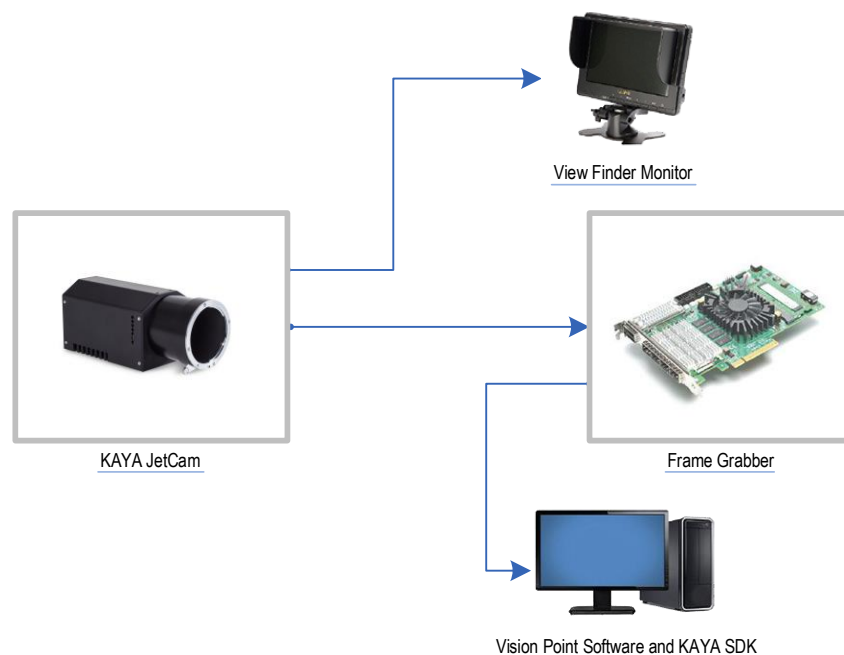
Canon EF mount:



M42 mount:



KAYA High Speed Camera Workflow



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:



❖ Supported vision libraries:



❖ Supported operating systems:



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



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International Distributor

KAYA Instruments

Please feel free to contact our sales team for pricing, availability, documentation or customization at our e-mails – we will be happy to provide assistance and consultation.



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