

# BOBCAT

## INTELLIGENT CAMERA SERIES

### ISD-B1320



**IMPERX** ISD-B1320 is an advanced progressive scan, fully programmable CCD camera designed for imaging applications that require high quality images, powerful features and flexibility. The camera is small, light weight, and built around Kodak's KAI-01150 5.5 micron Interline Transfer CCD image sensor with a 1/2" optical format.

The ISD-B1320 provides an image resolution of 1280 x 720 and delivers 50/60 frames per second at full resolution. The camera's 14 bit internal data image processing engine is based on an industrial grade high-speed, high-density FPGA, enabling a broad standard feature set and easy implementation of demanding custom imaging solutions. The thermally optimized, mechanical and electrical design plus the extended operating temperature range (-40°C to +85°C), and high MTBF of 660,000 hours @ 40C, make this HD-SDI camera a perfect fit for the most demanding industrial, medical, scientific and military applications. This camera is also available with CoaXPress, Camera Link®, or GigE Vision® interfaces.

#### Features

- 1280 x 720 @ 60 frames per second
- Mono, color
- 50p, 60p (59.94)p
- HD-SDI
- RS232 and RS485 serial communication
- Analog and digital gain and offset control
- Six (6) independent horizontal and vertical AOIs
- Programmable frame time and speed
- Programmable external trigger (optional)
- Internal/External exposure control
- Automatic gain, exposure and iris control
- Automatic white balance
- Internal/External H and V sync input/output

- Left/right digital bit shift
- Test image with image superimposition
- Built in pulse generator
- Programmable I/O mapping
- Dynamic transfer function correction
- Dynamic black level correction
- Defective and hot pixel correction (static/dynamic)
- Temperature monitor
- Field upgradeable firmware
- Customer defined Look Up Table (LUT)
- Reverse image (H mirror)
- MTBF of 660,000 hours @ 40°C

#### APPLICATIONS

- Aerial Mapping
- Aerial Robots: Military, Police
- Aerospace
- Agriculture
- Automation

- Automotive
- Biometrics
- Broadcasting
- Printed Circuit Board (PCB)
- Electronics
- Energy/Solar/Wind Power

- Flat Panel Inspection
- Food/Beverage
- Homeland Security
- Law Enforcement
- Intelligent Traffic Systems (ITS)
- Medical Devices/Imaging

- Metrology
- Microscopy
- Military/Defense
- Pharmaceuticals
- Particle Image Velocimetry (PIV)
- Radiology

- Robotics
- Scientific Apps
- Surveillance
- Semiconductors
- Transportation
- Textile/Apparel



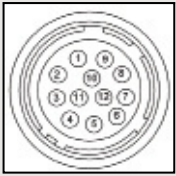
# BOBCAT ISD-B1320 Specifications

Maximum Resolution	1280 x 720
Sensor Type	KAI-01150, CCD, 1/2" optical format
Pixel Size	5.5 $\mu$ m
Frame Rate	50/60 fps
Minimum S/N ratio	60 db
Video Output	Digital HD-SDI (SMPTE 292), 720p
Horizontal Frequency	37.500/45.400 KHz
Vertical Frequency	50/60.00/59.94 Hz
Area of Interest	6 independent AOIs, 2 x 2 to 1280 x 720
Shutter Speed	1/100,000 to 1/60 sec (nom)
Long Integration	Up to 16 sec
Gamma Correction	G=1.0, G= 0.45, user upgradable LUT
Video Gain	36 dB range, 1024 steps, 0.0351 dB per step
Exposure and AGC	Manual, Auto, Programmable
Iris Control	Auto, Programmable

Strobe Output	Yes
Image Overlay	Yes, Programmable
RS232/RS485 Interface	Yes
Data Corrections	DPC, HPC, LUT
Min. Illumination	1 Lux, F/1.4
Supply Input Range	12 VDC, (10V min, 15V max)
Power Consumption	4.5W, 370mA steady, 1.5 A inrush
Size (W x H x L)	46 x 46 x 69.85mm
Weight	250g
Lens Mount	C-Mount
Vibration, Shock	10G (20 - 200) Hz XYZ, 70G
Environmental	Operation (-40° to +85°)C Storage (-40° to +90°)C
Humidity	10% to 90% non-condensing
MTBF	660,000 hours @ 40°C
Regulatory	FCC 15 part A, CE, RoHS

Programmable position and duration	Yes, Programmable
Yes, Programmable	
DPC, HPC, LUT	
1 Lux, F/1.4	
12 VDC, (10V min, 15V max)	
4.5W, 370mA steady, 1.5 A inrush	
46 x 46 x 69.85mm	
250g	
C-Mount	
10G (20 - 200) Hz XYZ, 70G	
Operation (-40° to +85°)C	
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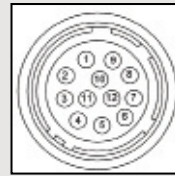
## Power and I/O Interface:



1	12V DC return	7	OUT1 Signal
2	+12V DC	8	IN1 Signal
3	IRIS VCC	9	IN2 Signal
4	IRIS Video	10	IN1/2 Return
5	IRIS Return	11	Reserved
6	OUT1/2 Return	12	OUT2 Signal

Connector: Hirose HR 10A-10R-12PB(71)

## Lens Control:



1	RX 485 COM	7	Lens CTRL4
2	RX 485 +	8	Lens CTRL5
3	RX 485 -	9	Lens CTRL6
4	Lens CTRL1	10	RS 232 COM
5	Lens CTRL2	11	RS 232 RX
6	Lens CTRL3	12	RS 232 TX

Connector: Hirose HR 10A-10R-12SB(71)

**Accessories:** PS12V04: Power Supply (sold separately)

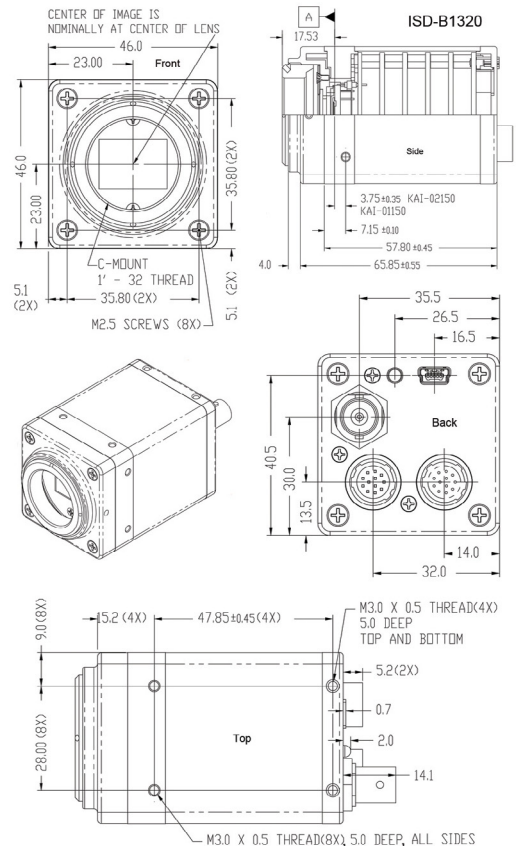
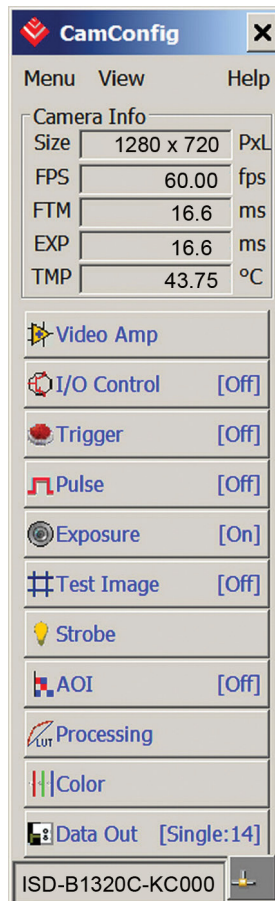
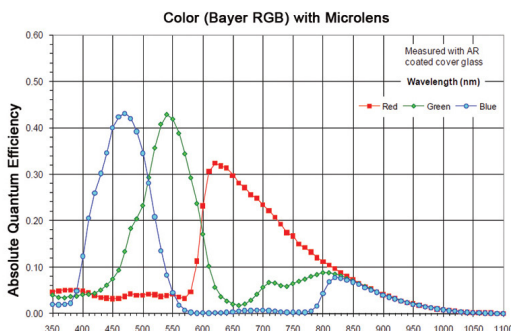
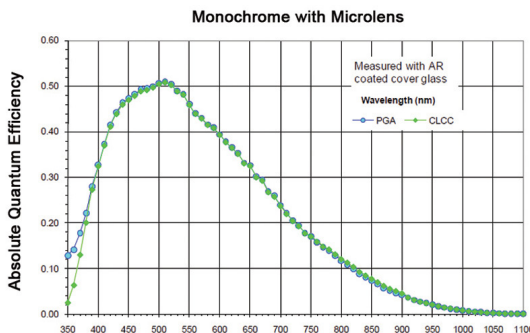
**Order Options:** ISD-B1320M-KCO Monochrome HD-SDI Output  
ISD-B1320C-KCO Color HD-SDI Output

For specific details and ordering information, consult the camera user's manual or contact IMPERX at [sales@imperx.com](mailto:sales@imperx.com).

## Spectral Response

## Software/Drivers/Interface

## Mechanical Dimensions



Note: Datum "A" refers to the imaging plane of sensors: KAI-01150 and KAI-02150



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