# BOBCAT
INTELLIGENT CAMERA SERIES

ISD-B1921

IMPERX ISD-B1921 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-02150 5.5 micron Interline Transfer CCD image sensor with a 2/3" optical format.

The ISD-B1921 provides an image resolution of 1920 x 1080 and delivers 25/30 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 hrs @ 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

1920/1080 @30 frames per second
Mono, color
24p, 25p, 50i, 30(29.97)p, 60(59.94)i
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)
Two dimensional Flat Field Correction
Reverse image (H mirror)
MTBF of 660,000 hours @ 40°C

IMPERX™

BOBCAT ISD-B1921 Specifications

Maximum Resolution	1920 x 1080
Sensor Type	2/3" CCD KAI-02150
Pixel Size	5.5 µm
Frame Rate	25/30 fps
Minimum S/N ratio	60 db
Video Output	Digital HD-SDI (SMPTE 292), 1080i,1080p
Horizontal Frequency	33.75/33.716 KHz
Vertical Frequency	30.00/29.97 Hz, 60.00/59.94 Hz
Area of Interest	6 independent AOIs, 2 x 2 to 1920 x 1080
Shutter Speed	1/100,000 to 1/30 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	Programmable position and duration
Image Overlay	Yes, Programmable
RS232/RS485 Interface	Yes
Data Corrections	DPC, HPC, LUT, FFC
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 hrs. @ 40°C
Regulatory	FCC 15 part A, CE, RoHS

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)

Accessories: PS12V04: Power Supply (sold separately)

Order Options:
ISD-B1921M-KCO Monochrome HD-SDI Output
ISD-B1921C-KCO Color HD-SDI Output

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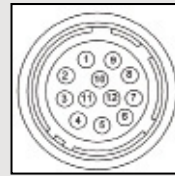
1	RX 485 COM	7	Lens CTRL4
2	RX 485 +	8	Lens CTRL5
3	RX 485 -	9	Lens CTRL6
4	Lens CTRL1	10	RS 232 COM
5	Lens CTRL2	11	RS 232 RX
6	Lens CTRL3	12	RS 232 TX

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

For specific details and ordering information, consult the camera user's manual or contact IMPERX at sales@imperx.com.

Spectral Response	Software/Drivers/Interface	Mechanical Dimensions
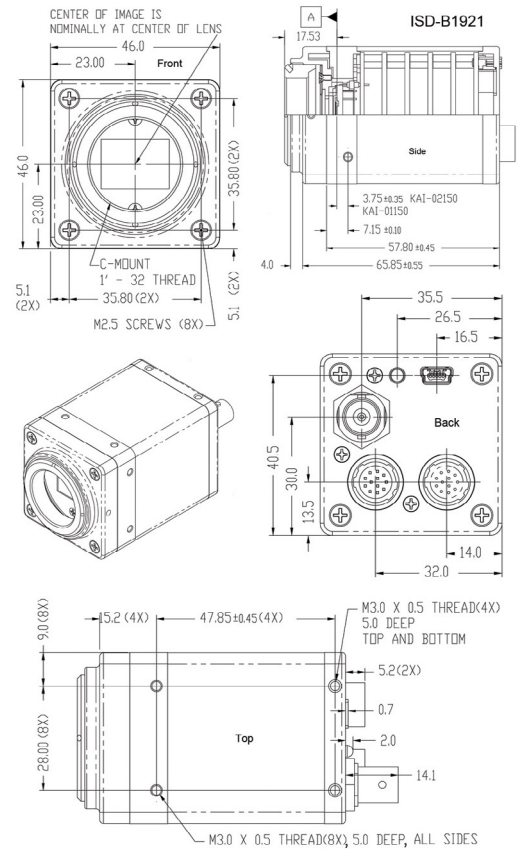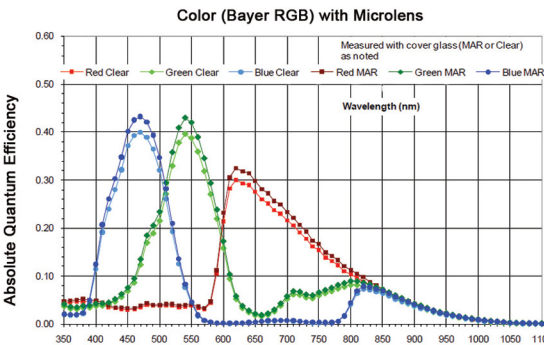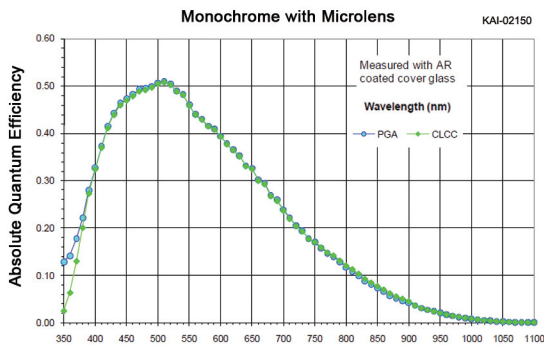
Note: Datum "A" refers to the imaging plane of sensors: KAI-01150 and KAI-02150