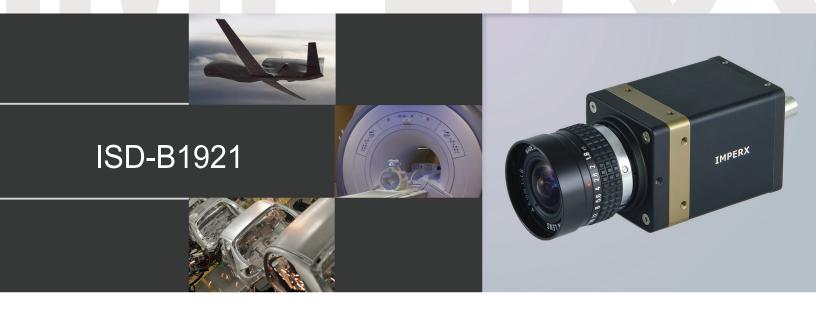
BOBCAT INTELLIGENT CAMERA SERIES



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

APPLICATIONS Aerial Mapping Aerial Robots: Military, Police Broadcasting Aerospace Agriculture Automation

Automotive Biometrics Printed Circuit Board (PCB) Law Enforcement Electronics Energy/Solar/Wind Power

Flat Panel Inspection Food/Beverage Medical Devices/Imaging

Metrology Microscopy Militarv/Defense Pharmaceuticals Intelligent Traffic Systems (ITS) Particle Image Velocimetry (PIV) Transportation Radiology

Robotics Scientific Apps Surveillance Semiconductors Textile/Apparel



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 Image Overlay	Programmable position and duration 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 2 +12V DC 3 IRIS VCC 4 IRIS Video 5 IRIS Return 6 OUT1/2 Return Connector: Hirose	8 9 10 11 n 12	IN1 Signāl IN2 Signal IN1/2 Return Reserved OUT2 Signal	
Accessories: PS12V04: Power Supply (sold separately)				
Order Options:	ISD-B1921M-KCO ISD-B1921C-KCO		ochrome HD-SDI Output r HD-SDI Output	

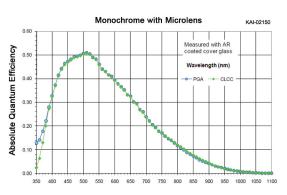
Lens Control:



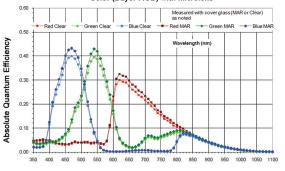
3 4 5	RX 485 COM RX 485 + RX 485 - Lens CTRL1 Lens CTRL2	11	Lens CTRL4 Lens CTRL5 Lens CTRL6 RS 232 COM RS 232 RX PS 232 TX
6	Lens CTRL3	12	RS 232 TX
Cor	nnector: Hirose HR	10A-	-10R-12SB(71)

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

Spectral Response



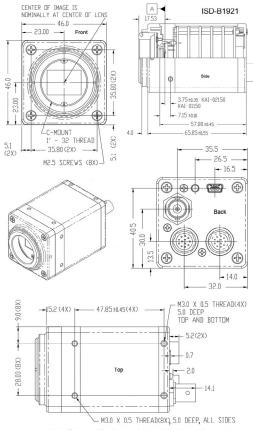




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ISD-B1921C-I	(C000	4.	

Software/Drivers/Interface

Mechanical Dimensions



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

IMPERX

IMPERX | 6421 Congress Avenue | Boca Raton | FL 33487 | USA Phone: +1-561-989-0006 | 1-866-849-1662 | Fax: +1-561-989-0045 www.imperx.com | sales@imperx.com Copyright © 2012, Imperx, Inc. Product information subject to change without notice. Rev. 1, 4/2012

