

IMPERX

BOBCAT

INTELLIGENT CAMERA SERIES

SDI-B1921



IMPERX SDI-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 the TRUESENSE Imaging KAI-02150 5.5 micron interline transfer CCD image sensor with a 2/3" optical format.

IMPERX SDI-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 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

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

Areas of Interest (AOIs): 1 master + 6 slaves

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



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WWW.IMPERX.COM | COPYRIGHT 2013 | SALES@IMPERX.COM

CAMERAS &
FRAME GRABBERS
MADE IN AMERICA



Bobcat SDI-B1921 Specifications

Maximum Resolution	1920 x 1080
Sensor Type	KAI-02150, CCD, 2/3" optical format
Pixel Size	5.5 μ m
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	AOIs: 1 master + 6 slaves
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	
RS232/RS485 Interface	
Data Corrections	
Min. Illumination	
Supply Input Range	
Power Consumption	
Size (W x H x L)	
Weight	
Lens Mount	
Vibration, Shock	
Environmental	

Programmable position and duration	Yes, Programmable
Yes	
DPC, HPC, LUT, FFC	
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	
Storage: (-40° to +90°)C	
10% to 90% non-condensing	
660,000 hours @ 40°C	
FCC part 15, Class A, CE, RoHS	

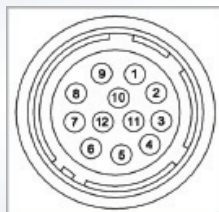
Humidity	
MTBF	
Regulatory	

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

Lens Control/RS232



See manual for PIN information

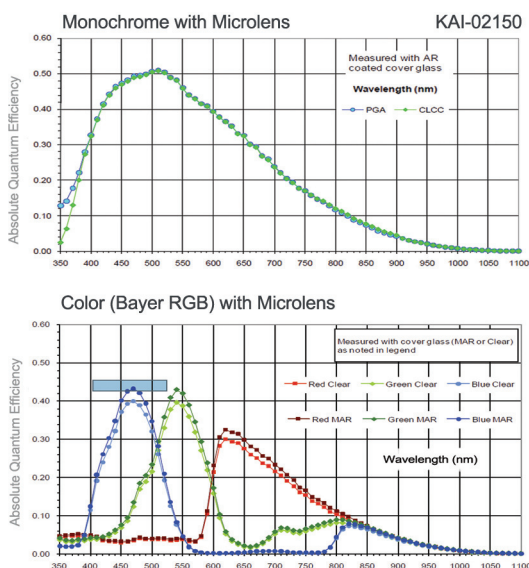
Order Options:

SDI-B1921M-TC0 – MONOCHROME HD-SDI OUTPUT
SDI-B1921C-TC0 – COLOR HD-SDI OUTPUT

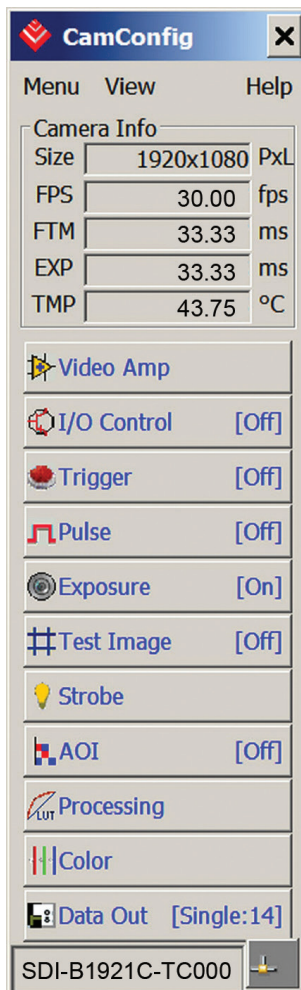
Accessories (sold separately):

PS12V04: Power Supply
CBL-PWIO01: 12 pin HIROSE (F) to open wire, 2m (Power & I/O)
CBL-GPIO02: 12 pin HIROSE (M) to DB15, 0.5m (LC & RS232)

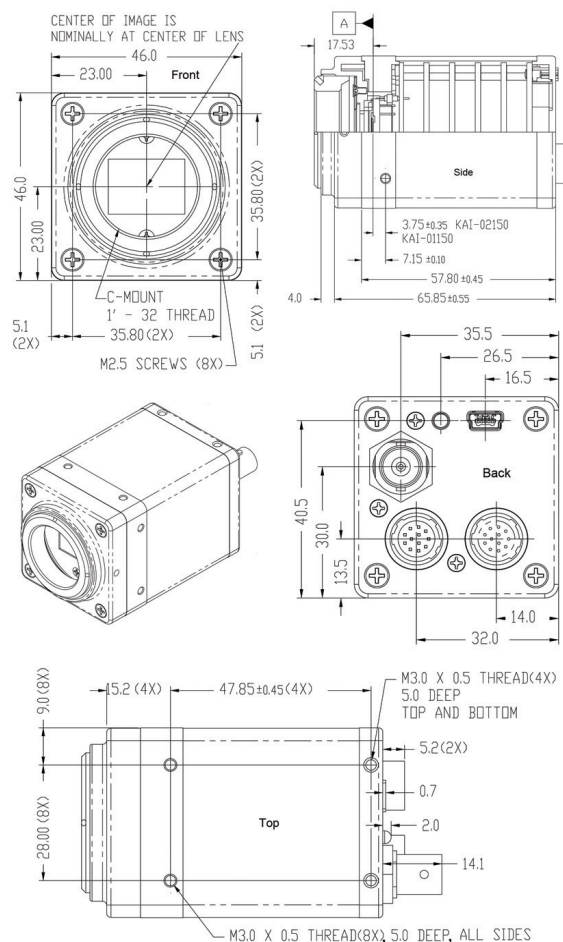
Spectral Response



Software/Drivers/Interface



Mechanical Dimensions



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