BOBCAT

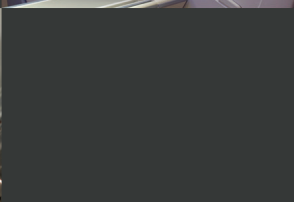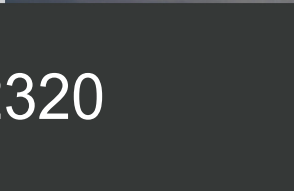## INTELLIGENT CAMERA SERIES

ICL-B2320

The ICL-B2320 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-04050 5.5 micron Interline Transfer CCD image sensor with a 1" optical format.

The ICL-B2320 provides an image resolution of 2352 x 1768 and delivers up to 21 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 Camera Link® camera a perfect fit for the most demanding industrial, medical, scientific and military applications. This camera is also available with the following interfaces: CoaXPress and GigE Vision.

Features

2352/2336 x 1768/1752
Mono, color, or TRUESENSE 8, 10, 12 bit single or dual output (14 bit is single only)
Normal and over-clock operation (16/21 fps)
Base Camera Link
RS232 serial communication
Analog and digital gain and offset control
1x, 2x, 3x, 4x, 8x horizontal and vertical binning
Eight (8) independent horizontal and vertical AOIs
Programmable horizontal and vertical resolution
Programmable line time, frame time and speed
Programmable external trigger
Internal/External exposure control
Standard, fast, frame accumulation, double and asynchronous triggering modes
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 hrs. @ 40°C.

BOBCAT ICL-B2320 Specifications

Maximum Resolution	2352 x 1768
Sensor Type	1" CCD KAI-04050
Pixel Size	5.50 µm
Frame Rate	16/21 fps (normal/overclock)
Max Frame Rate	126 FPS
Minimum S/N ratio	60 db
Video Output	Base Camera Link, mini CL interface, PoCL
Output Format	Mono, color, or TRUESENSE 8, 10, 12 bit single or dual output (14 bit is single only)
Binning H & V	x1, x2, x3, x4, x8
Area of Interest	8 independent AOIs, 2 x 2 to 2352 x 1768
Shutter Speed	1/500,000 to 1/16 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 Interface	Yes

Data Corrections	DPC, HPC, LUT, FFC
Hardware Trigger	LVTTL or TTL via IN1/IN2, level, edge, pulse-width, programmable
Software Trigger	Software internal, level, edge, pulse-width, programmable
Trigger Modes	Programmable, standard, double exposure, fast, frame accumulation, asynchronous
Min. Illumination	1 Lux, F/1.4
Supply Input Range	12 VDC, (10V min, 15V max)
Power Consumption	3.2 W, 270 mA steady, 1.5 A inrush
Size (W x H x L)	46 x 46 x 50mm
Weight	165g
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)

Order Options:

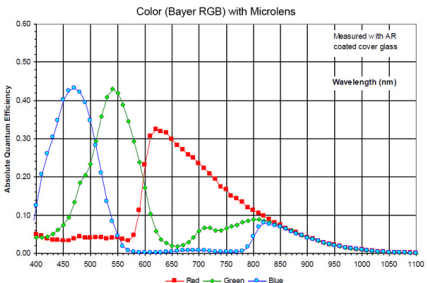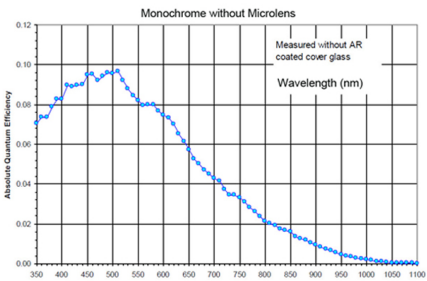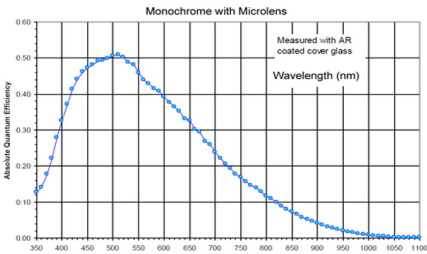|	
ICL-B2320M-KCO	Monochrome CameraLink Output
ICL-B2320C-KCO	Color CameraLink Output
ICL-B2320T-KCO	TRUESENSE CameraLink Output

Accessories:
PS12V04: Power Supply (sold separately)

Spectral Response

Monochrome with Microlens

Monochrome without Microlens

Color (Bayer RGB) with Microlens

Software/Drivers/Interface

CamConfig

Menu   View   Help

Camera Info
Size   2000x589   PxL
FPS   38.883   fps
FTM   25.718   ms
EXP   25.718   ms
TMP   39.75   °C

Video Amp
I/O Control   [Off]
Trigger   [Off]
Pulse   [Off]
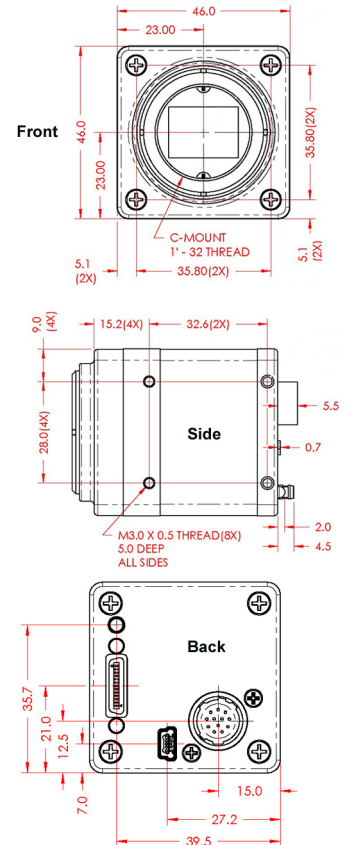Exposure   [Off]
Test Image   [Off]
Strobe
AOI   [On]
Processing
Color
Data Out   [Dual:12]

ICL-B2320C-KC000

Mechanical Dimensions

Made in USA