BOBCAT
INTELLIGENT CAMERA SERIES

ICL-B1320

IMPERX ICL-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 TRUESENSE Imaging´s KAI-01150 5.5 micron interline transfer CCD image sensor with a 1/2" optical format.

IMPERX ICL-B1320 provides an image resolution of 1320 x 736 and delivers up to 85 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 Camera Link® camera a perfect fit for the most demanding industrial, medical, scientific and military applications. This camera is also available with CoaXPress or GigE Vision® interfaces.

Features
1320/1280 x 736/720
Mono, color, or TRUESENSE Sparse CFA 8, 10, 12 bit single or
  dual output (14 bit is single only)
Normal and over-clock operation (68/85 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 (optional)
Reverse image (H mirror)
MTBF of 660,000 hours @ 40°C

IMPERX

BOBCAT ICL-B1320 Specifications

Maximum Resolution	1320 x 736	Data Corrections	DPC, HPC, LUT, FFC
Sensor Type	KAI-01150, CCD, 1/2" optical format	Hardware Trigger	LVTTL or TTL via IN1/IN2, level, edge, pulse-width, programmable
Pixel Size	5.50 µm		
Frame Rate	68/85 fps (normal/overclock)	Software Trigger	Software internal, level, edge, pulse-width, programmable
Max Frame Rate	395 FPS		
Minimum S/N ratio	60 db	Trigger Modes	Programmable, standard, double exposure, fast, frame accumulation, asynchronous
Video Output	Base Camera Link, mini CL interface, PoCL		
Output Format	Mono, color, or TRUESENSE Sparse 8, 10, 12 bit single or dual output (14 bit is single only)	Min. Illumination	1 Lux, F/1.4
		Supply Input Range	12 VDC, (10V min, 15V max)
Binning H & V	x1, x2, x3, x4, x8	Power Consumption	3.0 W, 250 mA steady, 1.5 A inrush
Area of Interest	8 independent AOIs, 2 x 2 to 1320 x 736	Size (W x H x L)	46 x 46 x 50.6mm
Shutter Speed	1/250,000 to 1/68 sec (nom)	Weight	186g
Long Integration	Up to 16 sec	Lens Mount	C-Mount
Gamma Correction	G=1.0, G= 0.45, user upgradable LUT	Vibration, Shock	10G (20 - 200) Hz XYZ, 70G
Video Gain	36 dB range, 1024 steps, 0.0351 dB per step	Environmental	Operation (-40° to +85°)C Storage (-40° to +90°)C
Exposure and AGC	Manual, Auto, Programmable		
Iris Control	Auto, Programmable	Humidity	10% to 90% non-condensing
Strobe Output	Programmable position and duration	MTBF	660,000 hours @ 40°C
Image Overlay	Yes, Programmable	Regulatory	FCC 15 part A, CE, RoHS
RS232 Interface	Yes		

Power and I/O Interface:
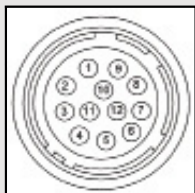
1	12V DC Return	7	OUT1 Signal
2	+12V DC	8	IN1 Signal
3	IRIS VCC	9	IN2 Signal
4	IRIS Video	10	IN1/2 Return
5	IRIS Return	11	Reserved
6	OUT1/2 Return	12	OUT2 Signal

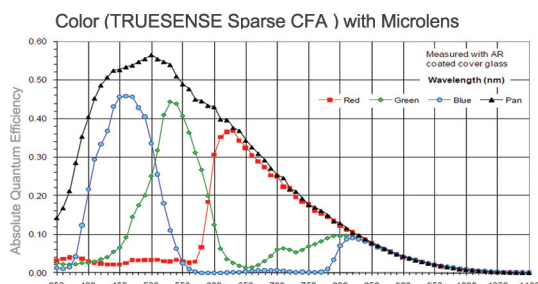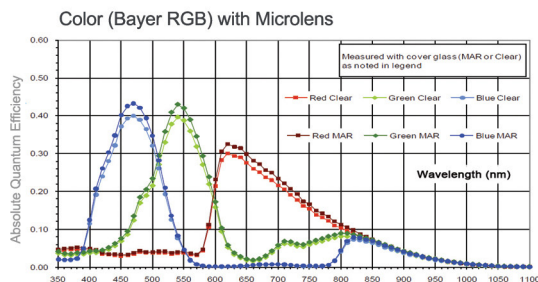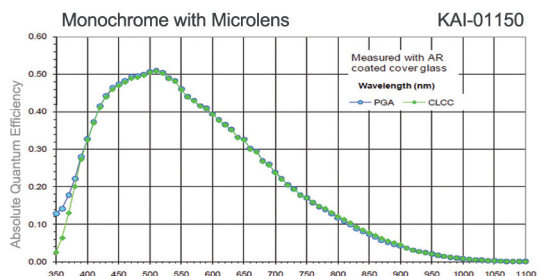Connector: Hirose HR 10A-10R-12PB(71)

Order Options:

ICL-B1320M-TCO   Monochrome CameraLink Output
ICL-B1320C-TCO   Color CameraLink Output
ICL-B1320T-TCO   TRUESENSE Sparse CFA CameraLink Output
   For specific details and ordering information, consult the camera user's manual or contact IMPERX at sales@imperx.com.
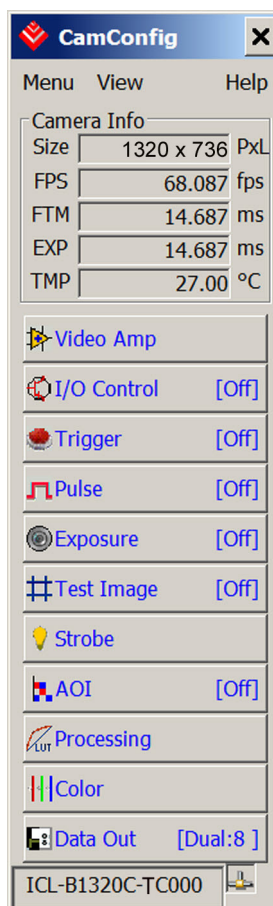
Accessories:
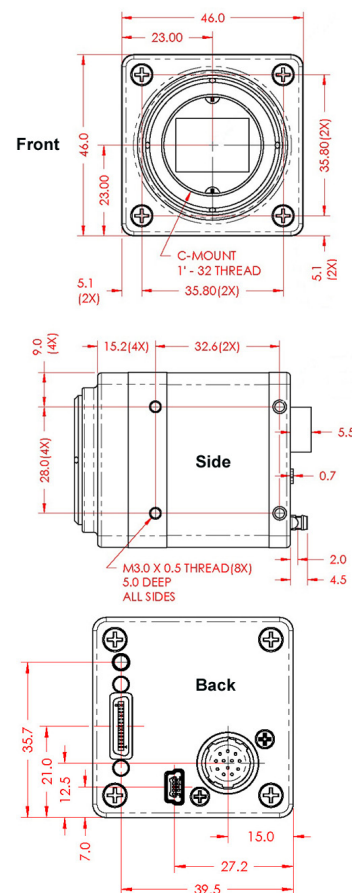
PS12V04: Power Supply (sold separately)

Spectral Response

Monochrome with Microlens — KAI-01150

Color (Bayer RGB) with Microlens

Color (TRUESENSE Sparse CFA) with Microlens

Software/Drivers/Interface

Mechanical Dimensions