BOBCAT
INTELLIGENT CAMERA SERIES

ICL-B1310

IMPERX ICL-B1310 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 SONY´s ICX 445 3.75 micron Interline Transfer CCD image sensor with a 1/3" optical format.

The ICL-B1310 provides an image resolution of 1296 x 966 and delivers up to 39 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
1296/1280 x 966/960
Mono or color 8, 10, 12, 14 or RGB 24 bit single output
Normal and over-clock operation (26/39 fps)
Base CameraLink
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)
Reverse image (H mirror) (optional)
MTBF of 660,000 hours @ 40°C

IMPERX

BOBCAT ICL-B1310 Specifications

Maximum Resolution	1296 x 966	Data Corrections	DPC, HPC, LUT
Sensor Type	ICX-445, CCD, 1/3" optical format	Hardware Trigger	LVTTL or TTL via IN1/IN2, level, edge, pulse-width, programmable
Pixel Size	3.75 µm		
Frame Rate	26/39 fps (normal/overclock)	Software Trigger	Software internal, level, edge, pulse-width, programmable
Max Frame Rate	170 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 or color 8, 10, 12, 14 or RGB 24 bit single outpt	Min. Illumination	0.2 Lux, F/1.4
Binning H & V	x1, x2, x3, x4, x8	Supply Input Range	12 VDC, (10V min, 15V max)
Area of Interest	8 independent AOIs, 2 x 2 to 1296 x 966	Power Consumption	1.8 W, 150 mA steady, 1.5 A inrush
Shutter Speed	1/200,000 to 1/26 sec (nom)	Size (W x H x L)	46 x 46 x 39mm
Long Integration	Up to 16 sec	Weight	136g
Gamma Correction	G=1.0, G= 0.45, user upgradable LUT	Lens Mount	C-Mount
Video Gain	36 dB range, 1024 steps, 0.0351 dB per step	Vibration, Shock	10G (20 - 200) Hz XYZ, 70G
Exposure and AGC	Manual, Auto, Programmable	Environmental	Operation (-40° to +85°)C Storage (-40° to +90°)C
Iris Control	Auto, Programmable		
Strobe Output	Programmable position and duration	Humidity	10% to 90% non-condensing
Image Overlay	Yes, Programmable	MTBF	660,000 hours @ 40°C
RS232 Interface	Yes	Regulatory	FCC 15 part A, CE, RoHS

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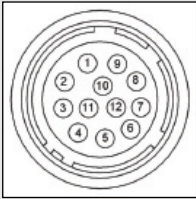
1	12V DC Return	7	OUT1 Signal
2	+12V DC	8	IN1 Signal
3	IRIS VCC	9	IN2 Signal
4	IRIS Video	10	IN1/2 Return
5	IRIS Return	11	Reserved
6	OUT1/2 Return	12	OUT2 Signal

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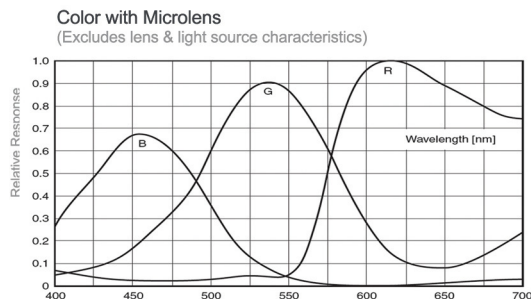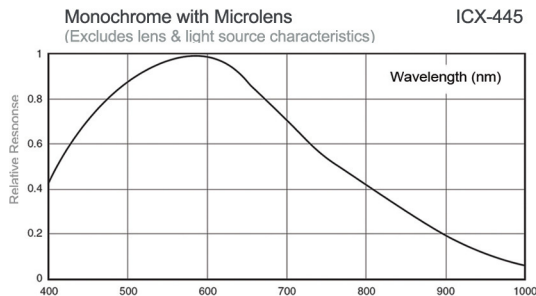
Order Options:

ICL-B1310M-SCO   Monochrome CameraLink Output
ICL-B1310C-SCO   Color CameraLink Output

For specific details and ordering information, consult the camera user's manual or contact IMPERX at sales@imperx.com.
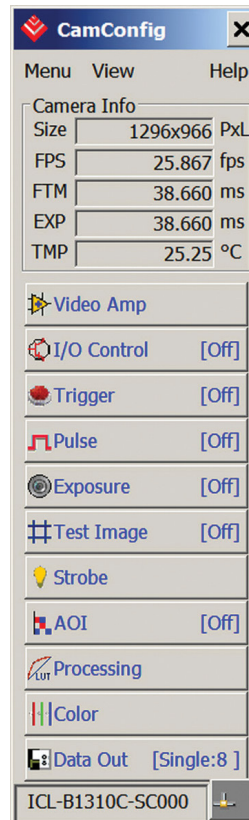
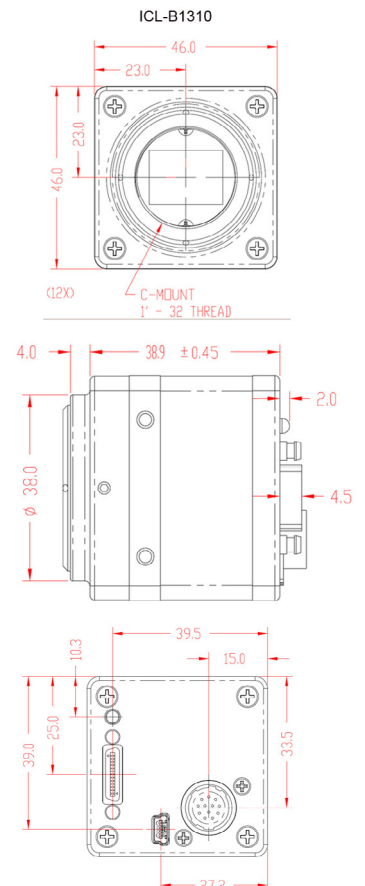**Accessories:**
PS12V04: Power Supply (sold separately)

Spectral Response

Monochrome with Microlens (Excludes lens & light source characteristics)   ICX-445

Color with Microlens (Excludes lens & light source characteristics)

Software/Drivers/Interface

Mechanical Dimensions

ICL-B1310