IMPERX

BOBCAT

INTELLIGENT CAMERA SERIES

ICL-B1411

The ICL-B1411 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-267 4.6 micron Interline Transfer CCD image sensor with a 1/2" optical format.

The ICL-B1411 provides an image resolution of 1392 x 1040 and delivers up to 31 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

1392/1360 x 1040/1024
Mono or color 8, 10, 12, 14 or RGB 24 bit single output
Normal and over-clock operation (24/31 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)
Reverse image (H mirror) (optional)
MTBF of 660,000 hrs. @ 40°C.

APPLICATIONS
Aerial Mapping	Automotive	Flat Panel Inspection	Metrology	Robotics
Aerial Robots: Military, Police	Biometrics	Food/Beverage	Microscopy	Scientific Apps
Aerospace	Broadcasting	Homeland Security	Military/Defense	Surveillance
Agriculture	Printed Circuit Board (PCB)	Law Enforcement	Pharmaceuticals	Semiconductors
Automation	Electronics	Intelligent Traffic Systems (ITS)	Particle Image Velocimetry (PIV)	Transportation
	Energy/Solar/Wind Power	Medical Devices/Imaging	Radiology	Textile/Apparel

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BOBCAT ICL-B1411 Specifications

Maximum Resolution	1392 x 1040
Sensor Type	1/2" CCD ICX 267
Pixel Size	4.65 µm
Frame Rate	24/31 fps (normal/overclock)
Max Frame Rate	247 FPS
Minimum S/N ratio	60 db
Video Output	Base Camera Link, mini CL interface, PoCL
Output Format	Mono or color 8, 10, 12, 14 or RGB 24 bit single output
Binning H & V	x1, x2, x3, x4, x8
Area of Interest	8 independent AOIs, 2 x 2 to 1392 x 1040
Shutter Speed	1/250,000 to 1/24 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
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	2.6 W, 220 mA steady, 1.5 A inrush
Size (W x H x L)	46 x 46 x 39mm
Weight	171g
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-B1411M-SCO   Monochrome Camera Link Output
ICL-B1411C-SCO   Color Camera Link Output

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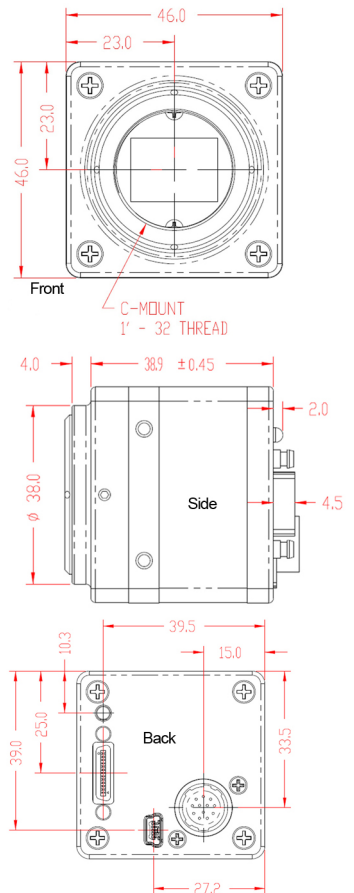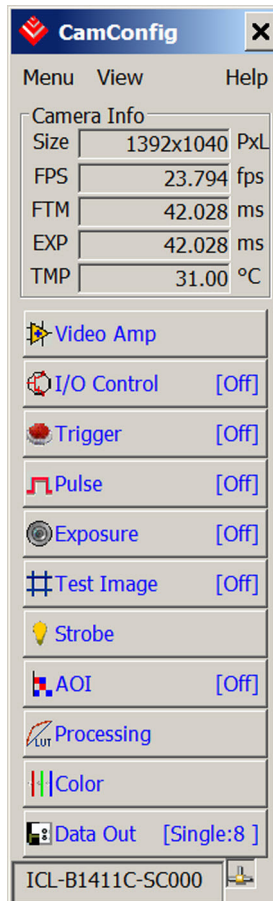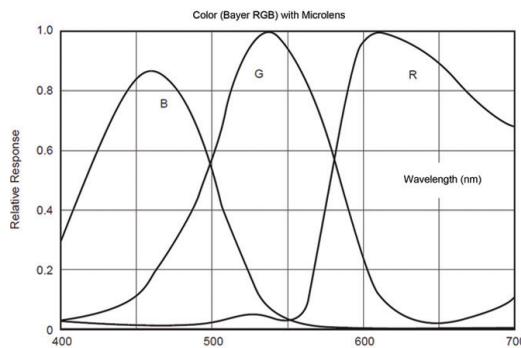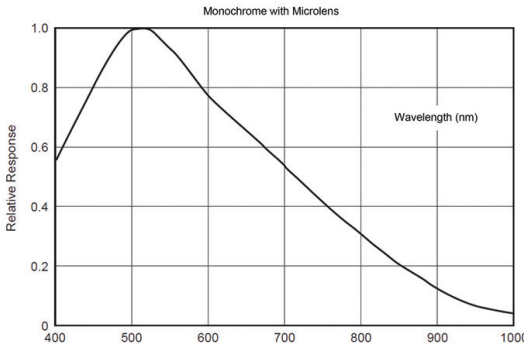
Accessories:
PS12V04: Power Supply (sold separately)

Spectral Response

Monochrome with Microlens

Color (Bayer RGB) with Microlens

Software/Drivers/Interface

Mechanical Dimensions

Made in USA