



BOBCAT

INTELLIGENT CAMERA SERIES

ICL-B1610



The **ICL-B1610** is an advanced high-speed progressive scan, fully programmable CCD camera designed for imaging applications that require high frame rates, high quality images, and powerful features and flexibility. The camera has a small size, light weight, and is built around SONY'S ICX-274 Interline transfer CCD image sensor with a 1/1.8" optical format. ICL-B1610 is available with CameraLink output (PoCL support).

The B1610 provides an image resolution of 1628 x 1236 and delivers 25 frames per second at full resolution. The camera image processing engine is based on a high-speed, high-density FPGA, featuring programmable resolution, speed, 8 independent AOIs, binning, triggering, exposure control, line and frame time, I/O mapping, external/internal sync, AGC, transfer function correction, user LUT, and Defective and Hot Pixel Correction (DPC, HPC).

Features

- 1620/1628 x 1220/1236
- Mono and color - 8/10/12/14-bit data
- Color - 3x8-bit (RGB) data, auto white balance (optional)
- Normal and over-clock operation (17/25 fps)
- Base CameraLink, PoCL support
- 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:
 - 3 triggering sources
 - 5 triggering modes
- Automatic gain, exposure and iris control

- Internal/External exposure control
- 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
 - 4 programmable inputs
 - 3 programmable outputs
- Dynamic transfer function correction
- Dynamic black level correction
- Defective and hot pixel correction
- Temperature monitor
- Field upgradeable firmware, LUT, DPC, HPC

Applications

- Industrial
- Medical
- Microscopy
- Military
- Scientific
- Surveillance

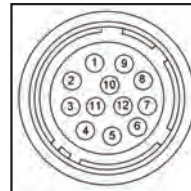
SACASA INDUSTRIES ET SYSTEMES
2 rue Henri Janin – 78470 ST REMY LES CHEVREUSE
Tel : 01 30 47 45 86 – Fax : 01 30 47 93 37
info@sais.fr – www.sais.fr

Specifications for Bobcat ICL-B1610

Maximum Resolution	1628 x 1236
Sensor Type	1/1.8" CCD ICX274
Pixel Size	4.40 um
Frame Rate	17/25 fps
Max Frame Rate	210 fps
Minimum S/N ratio	60 db
Video output	Base CameraLink, mini CL interface
Output format	8, 10, 12, 14 bit (selectable), single tap
Binning H & V	x1, x2, x3, x4, x8
Area of Interest	8 independent AOIs, 2 x 2 to 1628 x 1236
Shutter Speed	1/200000 to 1/16
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
Hardware trigger	LVTTL or TTL via IN1/IN2, optically isolated, level, edge, pulse-width, programmable
Software trigger	Frame-grabber via CC1/CC2, level, edge, pulse-width, programmable
Trigger modes	Programmable, standard, double exposure, fast, frame accumulation, asynchronous
Strobe output	Programmable position and duration
Image Overlay	Yes, Programmable
RS232 Interface	Yes
Data corrections	Yes
Min. illumination	0.5 Lux, F/1.4
Power input range	12 VDC, (10 V – 15 V)
Power consumption	2.1 W PoCL
Size (W x H x L), Weight	45 x 45 x 39mm, 160g
Lens Mount	C mount
Vibration, Shock	10G (20 - 200)Hz XYZ, 70G
Environmental	Operation (-30° to 60°) C, storage (-40° to 70°) C
Humidity	10% to 90% non-condensing

Power and I/O Interface

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



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	OUT1/2 VCC
6	OUT1/2 Return	12	OUT2 Signal

Power Requirements

12V DC, (10V min, 15V max)
180 mA steady, 1.5 A inrush
2.1W, PoCL

Accessories

PS12V04: Power Supply (sold separately)

Ordering Information

Ordering: **ICL-B1610M-SCO**

Camera Family

B-Bobcat Family

Sensor Type

M-Monochrome

C-Color

Lens Mount

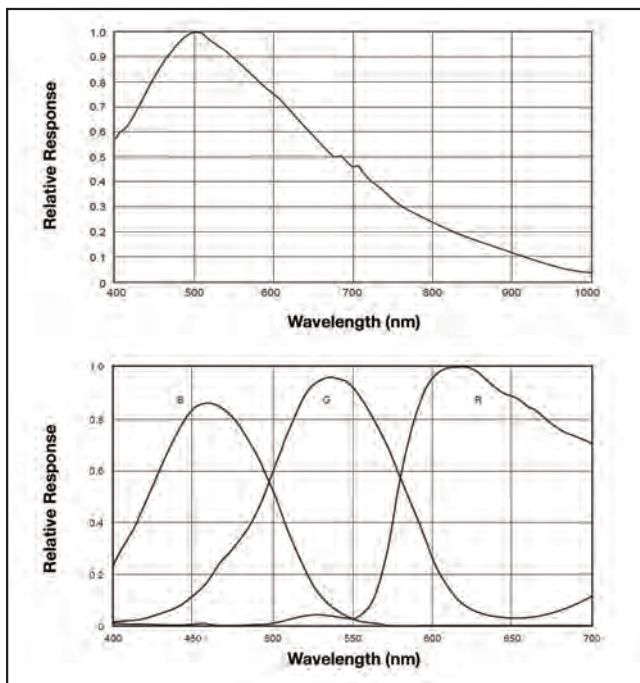
C-"C" mount (default)

F-"F" Mount

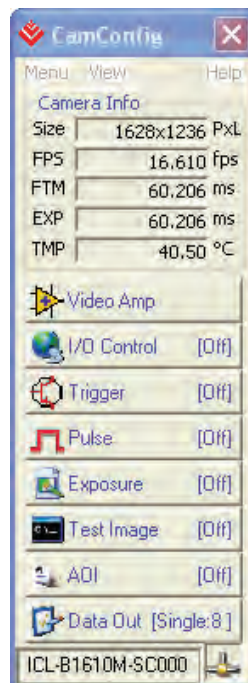
CCD

S-Sony

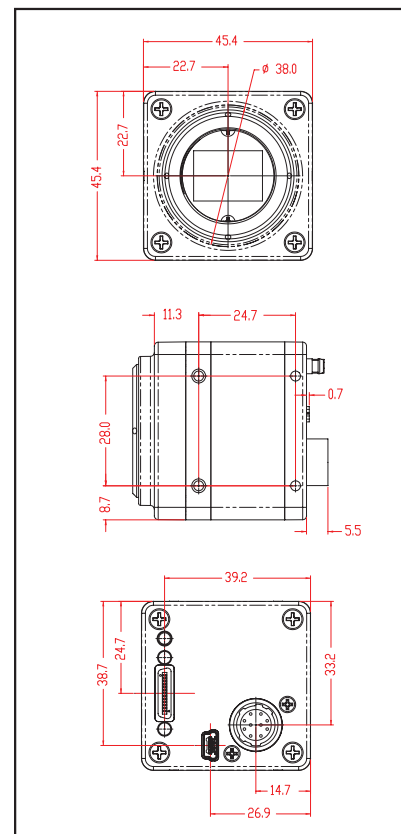
Spectral Response



Configuration Utility



Mechanical Dimensions



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