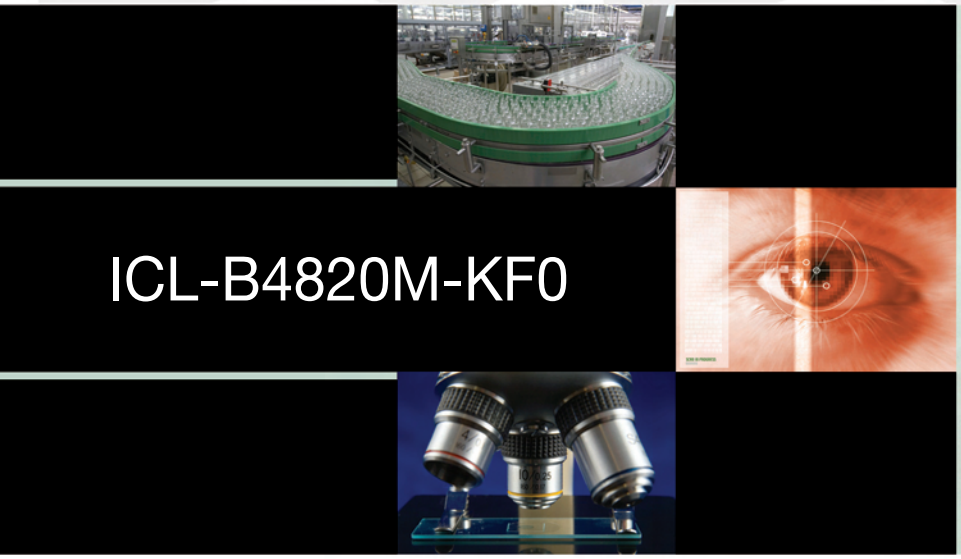
BOBCAT

INTELLIGENT CAMERA SERIES



ICL-B4820M-KF0

The **ICL-B4820** 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 Kodak´s KAI-16000 Interline transfer CCD image sensor with a 43.3 mm image diagonal. ICL-B4820 is available with CameraLink output.

The B4820 provides an image resolution of 4904 x 3280 and delivers up to 4.2 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, AEC, Auto Iris, transfer function correction, user LUT, Defective and Hot Pixel Correction (DPC, HPC), and Flat Field Correction (FFC).

Features

4904/4872 x 3280/3248
Mono and color - 8/10/12/14-bit data
Normal and over-clock operation (3.2/4.2 fps)
Base CameraLink
Two dimensional Flat Field Correction
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, FCC

Applications

Industrial
Medical
Microscopy
Military
Scientific
Surveillance

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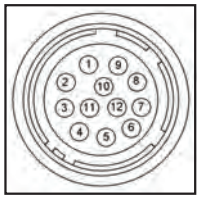
Specifications for Bobcat ICL-B4820M-KF0

Maximum Resolution	4904 x 3280
Sensor Type	43.3 mm diagonal CCD KAI-16000
Pixel Size	7.40 um
Frame Rate	3.2/4.2 fps (normal/overclock)
Max Frame Rate	18 fps
Minimum S/N ratio	60 db
Video output	Base Camera Link, mini CL interface
Output format	8, 10, 12 bit dual, 8, 10, 12, 14 bit single
Binning H & V	x1, x2, x3, x4, x8
Area of Interest	8 independent AOIs, 2 x 2 to 4904 x 3280
Shutter Speed	1/67000 to 1/3 sec
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	DPC, HPC, LUT, FFC
Min. illumination	1 Lux, F/1.4
Power input range	12 VDC, (10 V – 15 V)
Power consumption	3.3 W
Size (W x H x L), Weight	60 x 60 x 38mm, 280g
Lens Mount	F 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**	Reserved
6	OUT1/2 Return	**12**	OUT2 Signal

Power Requirements

12V DC, (10V min, 15V max)
270 mA steady, 1.5 A inrush
3.3W

Accessories

PS12V04: Power Supply (sold separately)

Ordering Information

Ordering: **ICL-B4820M-KFO**

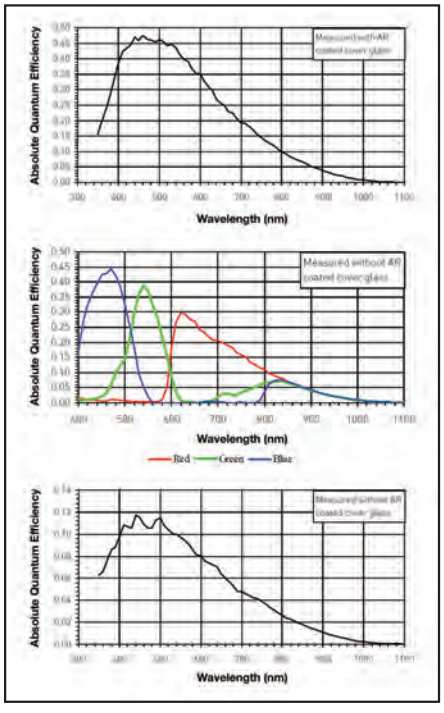
Camera Family
B-Bobcat Family

Sensor Type
M-Monochrome
C-Color

Lens Mount
F-"F" Mount (default)

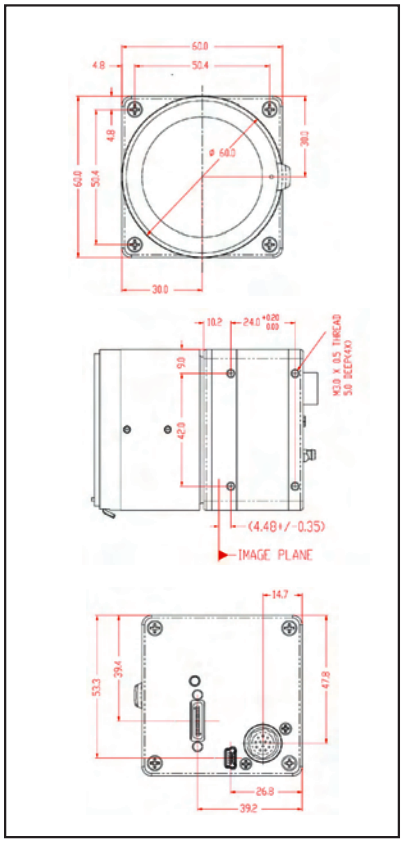
CCD
K-Kodak

Spectral Response



Configuration Utility

Mechanical Dimensions



Made in USA

For specific details and ordering information, consult the camera user's manual or contact us at sales@imperx.com.