

BOBCAT

INTELLIGENT CAMERA SERIES



ICL-B6620



The ICL-B6620 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-29050 5.5micron Interline transfer CCD image sensor with a 43.3 mm image diagonal. ICL-B6620 features CameraLink output. IGV-B6620 features GigE vision output.

The ICL-B6620 provides an image resolution of 6600 x 4400 and delivers up to 2.5 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, static and Dynamic Defective and Hot Pixel Correction (DPC, HPC), Flat Field Correction (FFC) and Horizontal Image Reversal. MTBF of 660,000 hrs. @ 40°C.

Features

- 6600/6576 x 4400/4384
- Mono and color - 8/10/12/14-bit data
- Normal and over-clock operation (1.8/2.5 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
- Internal/External exposure control
- Frame accumulation

- 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
 - 4 programmable inputs
 - 3 programmable outputs
- 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)
- Flat field correction
- Reverse image (H. mirror)

Applications

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

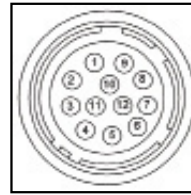


BOBCAT ICL-B6620 Specifications

| | |
|--------------------------|---|
| Maximum Resolution | 6600 x 4400 |
| Sensor Type | 43.3 mm diagonal CCD KAI-29050 |
| Pixel Size | 5.50 μ m |
| Frame Rate | 1.8/2.5 fps (normal/overclock) |
| Max Frame Rate | 13 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 6600 x 4400 |
| Shutter Speed | 1/125,000 to 1/2.5 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 |
| Hardware Trigger | LVTTL or TTL via IN1/IN2, 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 | 3.6 W (12V) |
| Size (W x H x L), Weight | 60 x 60 x 45mm, 320g |
| Lens Mount | F 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 |
| MBTF | MTBF of 660,000 hrs. @ 40°C |

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)
300 mA steady, 1.5 A inrush
3.6 W

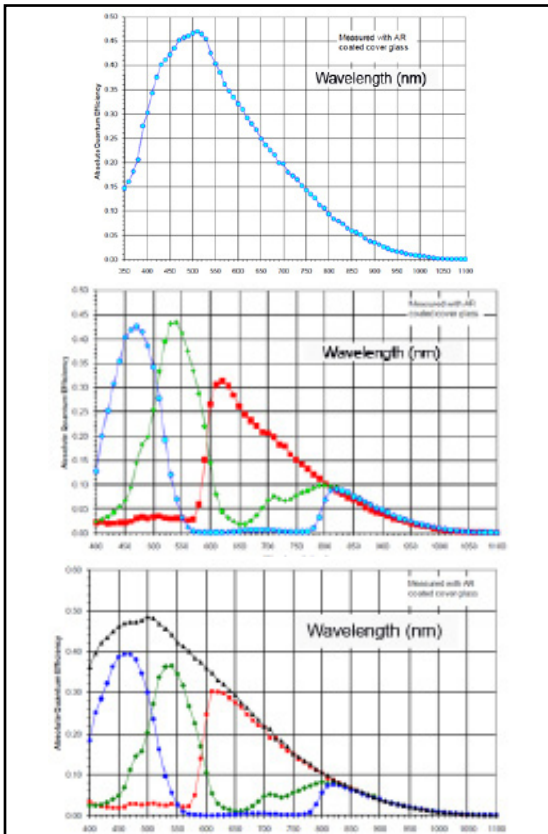
Accessories

PS12V04: Power Supply (sold separately)

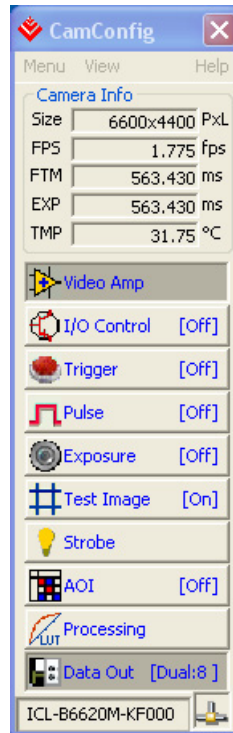
Ordering Options

| | |
|----------------|------------------------------|
| ICL-B6620M-KFO | Monochrome CameraLink Output |
| ICL-B6620C-KFO | Color CameraLink Output |
| IGV-B6620M-KFO | Monochrome GigE Output |
| IGV-B6620C-KFO | Color GigE Output |

Spectral Response

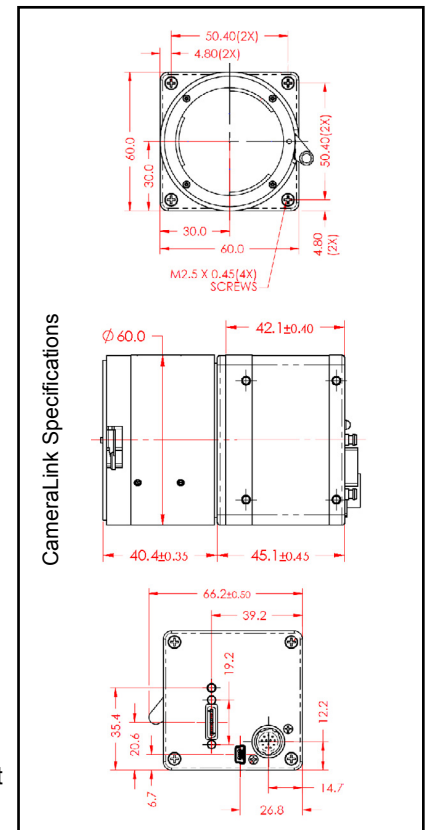


Configuration Utility



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

Mechanical Dimensions



IMPERX | 6421 Congress Avenue | Boca Raton | FL 33487 | USA
Phone: +1-561-989-0006 | 1-866-849-1662 | Fax: +1-561-989-0045
www.imperx.com | sales@imperx.com

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