

BOBCAT

INTELLIGENT CAMERA SERIES

ICL-B1620



IMPERX ICL-B1620 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 TRUESENSE Imaging's KAI-2020 7.4 micron Interline Transfer CCD image sensor with a 1.0" optical format.

IMPERX ICL-B1620 provides an image resolution of 1608 x 1208 and delivers up to 44 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

- 1608/1600 x 1208/1200
- Mono or color 8, 10, 12 bit single or dual output (14 bit is single only)
- Normal and over-clock operation (35/44 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
- 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)
- Two dimensional Flat Field Correction
- Reverse image (H mirror)
- MTBF of 660,000 hours @ 40°C

APPLICATIONS

- Aerial Mapping
- Aerial Robots: Military, Police
- Aerospace
- Agriculture
- Automation

- Automotive
- Biometrics
- Broadcasting
- Printed Circuit Board (PCB)
- Electronics
- Energy/Solar/Wind Power

- Flat Panel Inspection
- Food/Beverage
- Homeland Security
- Law Enforcement
- Intelligent Traffic Systems (ITS)
- Medical Devices/Imaging

- Metrology
- Microscopy
- Military/Defense
- Pharmaceuticals
- Particle Image Velocimetry (PIV)
- Radiology

- Robotics
- Scientific Apps
- Surveillance
- Semiconductors
- Transportation
- Textile/Apparel



BOBCAT ICL-B1620 Specifications

Maximum Resolution	1608 x 1208
Sensor Type	KAI-2020, CCD, 1.0" optical format
Pixel Size	7.40 µm
Frame Rate	35/44 fps (normal/overclock)
Max Frame Rate	299 FPS
Minimum S/N ratio	60 db
Video Output	Base Camera Link, mini CL interface, PoCL
Output Format	Mono or color 8, 10, 12 bit single or dual output (14 bit is single only)
Binning H & V	x1, x2, x3, x4, x8
Area of Interest	8 independent AOIs, 2 x 2 to 1608 x 1208
Shutter Speed	1/100,000 to 1/35 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
Hardware Trigger

Software Trigger

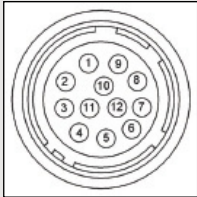
Trigger Modes

Min. Illumination
Supply Input Range
Power Consumption
Size (W x H x L)
Weight
Lens Mount
Vibration, Shock
Environmental

Humidity
MTBF
Regulatory

DPC, HPC, LUT, FFC
LVTTTL or TTL via IN1/IN2, level, edge, pulse-width, programmable
Frame grabber via CC1/CC2, level, edge, pulse-width, programmable
Programmable, standard, double exposure, fast, frame accumulation, asynchronous
1 Lux, F/1.4
12 VDC, (10V min, 15V max)
3.2 W, 270 mA steady, 1.5 A inrush
46 x 46 x 43mm
156g
C-Mount
10G (20 - 200) Hz XYZ, 70G
Operation (-40° to +85°)C
Storage (-40° to +90°)C
10% to 90% non-condensing
660,000 hours @ 40°C
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:

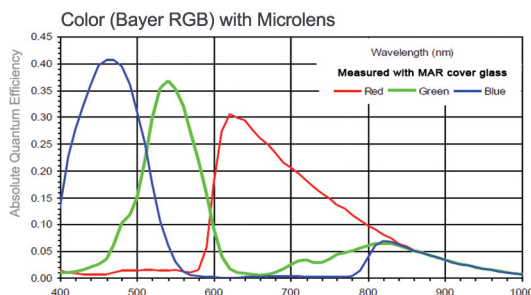
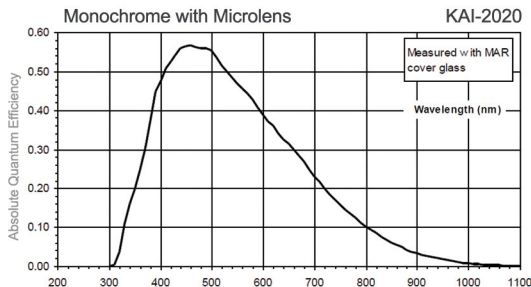
ICL-B1620M-TCO Monochrome Camera Link Output
ICL-B1620C-TCO Color Camera Link Output

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

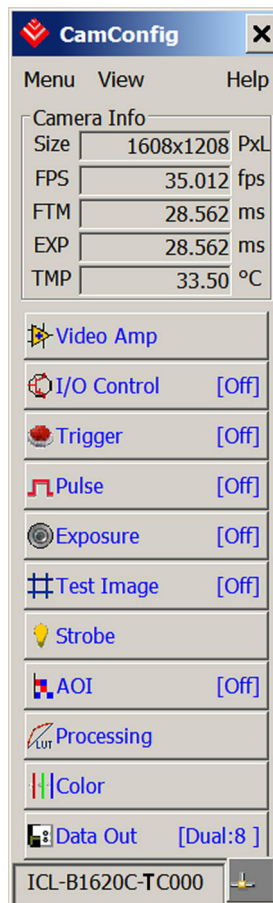
Accessories:

PS12V04: Power Supply (sold separately)

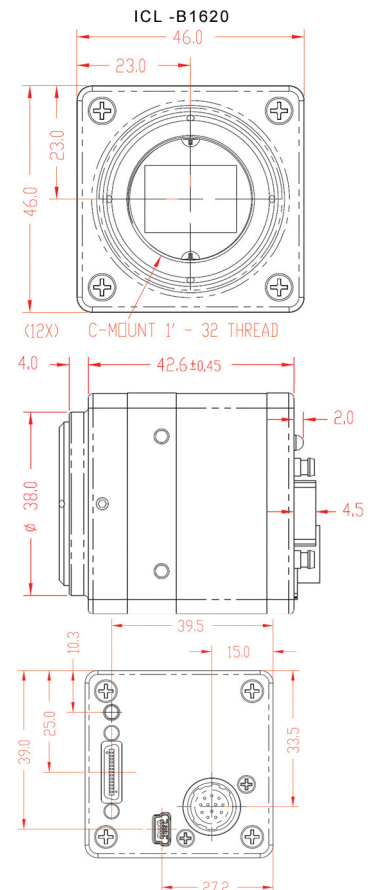
Spectral Response



Software/Drivers/Interface



Mechanical Dimensions



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