



BOBCAT

INTELLIGENT CAMERA SERIES



IGV-B2320



The IGV-B2320 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 Kodak's KAI-04050 5.5 micron Interline Transfer CCD image sensor with a 1" optical format.

The IGV-B2320 provides an image resolution of 2352 x 1768 and delivers up to 21 frames per second at full resolution. The camera 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 solution. The extended camera operating temperature range (-40°C to +85°C), and high MTBF of 660,000 hrs @ 40C, make this GigE Vision 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 Camera Link®.

Features

- 2352/2336 x 1768/1752
- Mono, color, or TRUESENSE 8, 10, 12 bit single or dual output (16 bit is single only)
- Normal and over-clock operation (16/21fps)
- 10/100/1000 Gigabit Ethernet LAN (RJ-45)
- 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 hrs. @ 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 IGV-B2320 Specifications

Maximum Resolution	2352 x 1768
Sensor Type	1" diagonal CCD KAI-04050
Pixel Size	5.50 μ m
Frame Rate	16/21 fps (normal/overclock)
Max Frame Rate	126 FPS
Minimum S/N ratio	60 db
Video Output	RJ45 CAT5e, CAT6
Output Format	Mono, color, or TRUESENSE 8, 10, 12 bit single or dual output (16 bit is single only)
Binning H & V	x1, x2, x3, x4, x8
Area of Interest	8 independent AOIs, 2 x 2 to 2352 x 1768
Shutter Speed	1/500,000 to 1/16 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

Data Corrections	DPC, HPC, LUT, FFC
Hardware Trigger	LVTTTL 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, (10 V – 15 V max)
Power Consumption	5.1 W, 430 mA steady, 1.5 A inrush
Size (W x H x L)	46 x 46 x 74.5mm
Weight	165g
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	MTBF of 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:

IGV-B2320M-KCO	Monochrome GigE Vision Output
IGV-B2320C-KCO	Color GigE Vision Output
IGV-B2320T-KCO	TRUESENSE GigE Vision Output

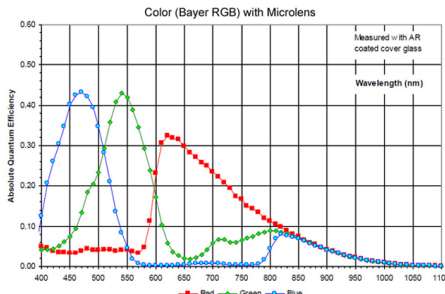
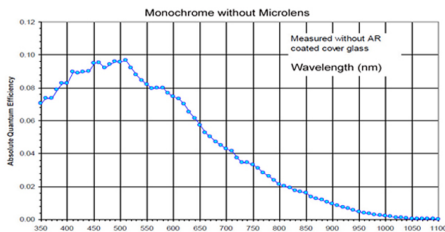
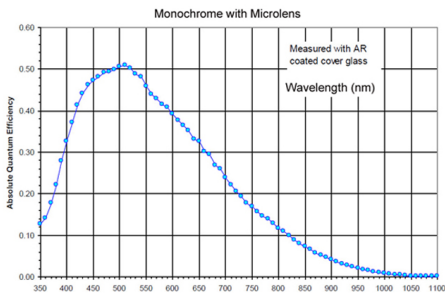
Accessories:

PS12V04: Power Supply (sold separately)

Spectral Response

Software/Drivers/Interface

Mechanical Dimensions



GigE Vision Protocol: 10/100/1000 Mb/s, 802.3, Ethernet V2.0, IPv4, IGMPv.2, UDP and ICMP, and GenICam

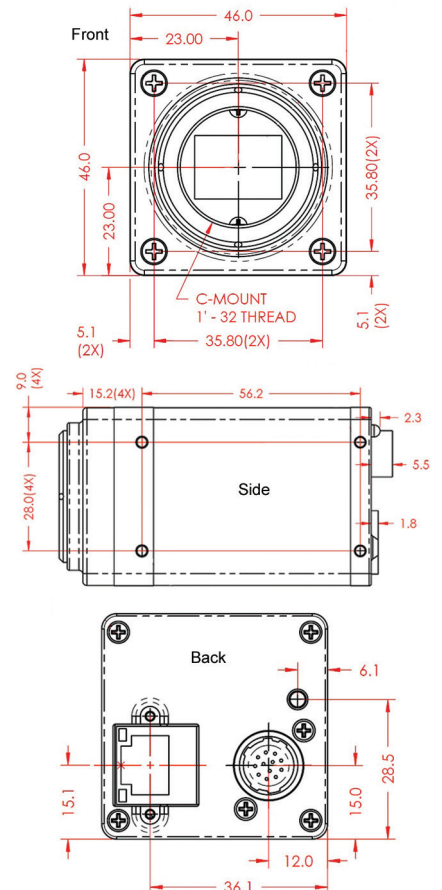
eBUS Drivers: Windows XP 32b, XP 64b, Vista 32b, Vista 64b, 7 32b, 7 64b. Linux: SuSE v10, RedHat 5 (Kernel 2.6)

Software: Pleora GEVPlayer, IMPERX GEV Player (includes CamConfig GUI), Bobcat GEV Download Utility, Net Command

SDK: PureGEV GigE Vision SDK for Windows (Microsoft Visual C++, COM, .NET, C#, VB.NET, Borland C++Builder), PureGEV, GigE Vision SDK for Linux

Compatible with: Labview, Halcon, MIL, Common Vision BLOX, StreamPix, ActiveGigE, and others

Multicast capable



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