BOBCAT
INTELLIGENT CAMERA SERIES

IGV-B2320

IMPERX 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 the TRUESENSE Imaging KAI-04050 5.5 micron interline transfer CCD image sensor with a 1" optical format.

IMPERX 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 hours @ 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 CoaXPress and Camera Link® interfaces.

Features

2352/2336 x 1768/1752
Mono, color, or TRUESENSE Sparse CFA 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 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

IMPERX

BOBCAT IGV-B2320 Specifications

Maximum Resolution	2352 x 1768	Data Corrections	DPC, HPC, LUT, FFC
Sensor Type	1" diagonal CCD KAI-04050	Hardware Trigger	LVTTL or TTL via IN1/IN2, level, edge, pulse-width, programmable
Pixel Size	5.50 µm		
Frame Rate	16/21 fps (normal/overclock)	Software Trigger	Software internal, level, edge, pulse-width, programmable
Max Frame Rate	126 FPS		
Minimum S/N ratio	60 db	Trigger Modes	Programmable, standard, double exposure, fast, frame accumulation, asynchronous
Video Output	RJ45 CAT5e, CAT6		
Output Format	Mono, color, or TRUESENSE Sparse CFA 8, 10, 12 bit single or dual output (16 bit is single only)		
		Min. Illumination	1 Lux, F/1.4
Binning H & V	x1, x2, x3, x4, x8	Supply Input Range	12 VDC, (10 V – 15 V max)
Area of Interest	8 independent AOIs, 2 x 2 to 2352 x 1768	Power Consumption	5.1 W, 430 mA steady, 1.5 A inrush
Shutter Speed	1/500,000 to 1/16 sec (nom)	Size (W x H x L)	46 x 46 x 74.5mm
Long Integration	Up to 16 sec	Weight	165g
Gamma Correction	G=1.0, G= 0.45, user upgradable LUT	Lens Mount	C-Mount
Video Gain	36 dB range, 1024 steps, 0.0351 dB per step	Vibration, Shock	10G (20 - 200)Hz XYZ, 70G
Exposure and AGC	Manual, Auto, Programmable	Environmental	Operation: (-40° to +85°)C
Iris Control	Auto, Programmable		Storage: (-40° to +90°)C
Strobe Output	Programmable position and duration	Humidity	10% to 90% non-condensing
Image Overlay	Yes, Programmable	MTBF	MTBF of 660,000 hours @ 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

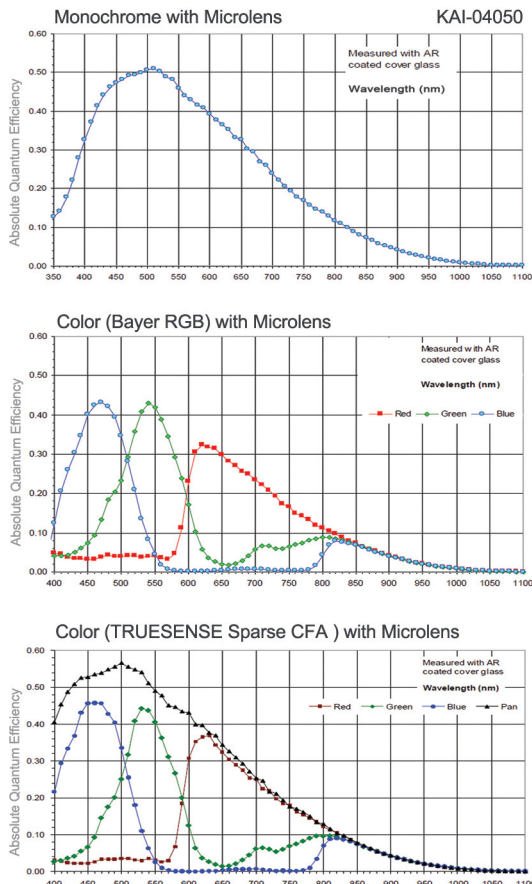Connector: Hirose HR 10A-10R-12PB(71)

Order Options:

IGV-B2320M-TCO	Monochrome GigE Vision Output
IGV-B2320C-TCO	Color GigE Vision Output
IGV-B2320T-TCO	TRUESENSE Sparse CFA GigE Vision 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

Monochrome with Microlens — KAI-04050

Color (Bayer RGB) with Microlens

Color (TRUESENSE Sparse CFA) with Microlens

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

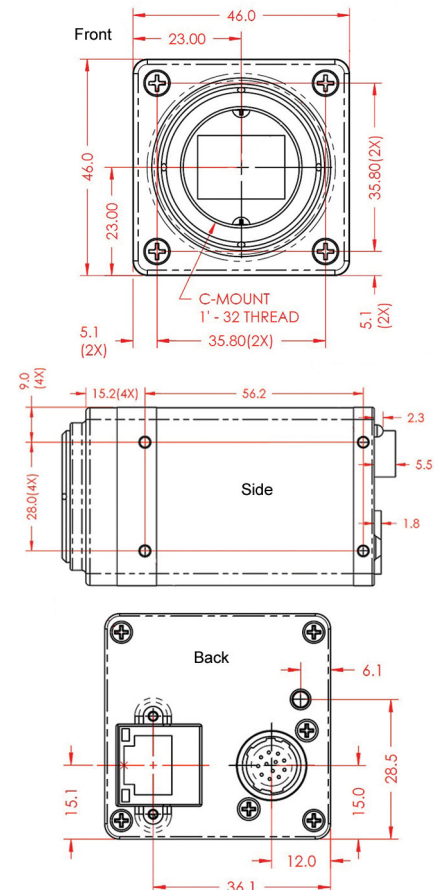eBUS Drivers: Windows XP 32b, XP 64b, Vista 32b, Vista 64b, 7 32b, 7 64b. Linux: SuSE v10, RedHat 5 (Kernel 2.6)

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