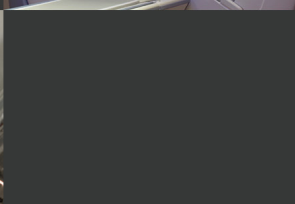
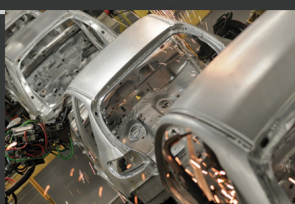


BOBCAT

INTELLIGENT CAMERA SERIES

IGV-B2020



IMPERX IGV-B2020 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-04022 7.4 micron interline transfer CCD image sensor with a 1.3" optical format.

IMPERX IGV-B2020 provides an image resolution of 2056 x 2060 and delivers up to 20 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 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

2056/2048 x 2060/2048

Mono or color 8, 10, 12 bit single or dual output
(16 bit is single only)

Normal and over-clock operation (16/20fps)

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

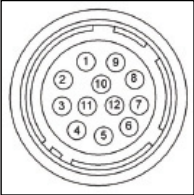
Textile/Apparel



BOBCAT IGV-B2020 Specifications

Maximum Resolution	2056 x 2060	Data Corrections	DPC, HPC, LUT, FFC
Sensor Type	21.5mm diagonal, CCD KAI-04022	Hardware Trigger	LVTTTL or TTL via IN1/IN2, level, edge, pulse-width, programmable
Pixel Size	7.40 μm	Software Trigger	Software internal, level, edge, pulse-width, programmable
Frame Rate	16/20 fps (normal/overclock)	Trigger Modes	Programmable, standard, double exposure, fast, frame accumulation, asynchronous
Max Frame Rate	123 FPS	Min. Illumination	1 Lux, F/1.4
Minimum S/N Ratio	60 db	Supply Input Range	12 VDC, (10 V – 15 V)
Video Output	RJ45 CAT5e, CAT6	Power Consumption	5.5 W, 450 mA steady (Typ), 1.5 A inrush
Output Format	Mono or color 8, 10, 12 bit single or dual output (16 bit is single only)	Size (W x H x L)	60 x 60 x 60mm
Binning H & V	x1, x2, x3, x4, x8	Weight	379g
Area of Interest	8 independent AOIs, 2 x 2 to 2056 x 2060	Lens Mount	F-Mount
Shutter Speed	1/100,000 to 1/16 sec (nom)	Vibration, Shock	10G (20 - 200)Hz XYZ, 70G
Long Integration	Up to 16 sec	Environmental	Operation: (-40° to +85°)C Storage: (-40° to +90°)C
Gamma Correction	G=1.0, G= 0.45, user upgradable LUT	Humidity	10% to 90% non-condensing
Video Gain	36 dB range, 1024 steps, 0.0351 dB per step	MTBF	660,000 hours @ 40°C
Exposure and AGC	Manual, Auto, Programmable	Regulatory	FCC 15 part A, CE, RoHS
Iris Control	Auto, Programmable		
Strobe Output	Programmable position and duration		
Image Overlay	Yes, Programmable		

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:

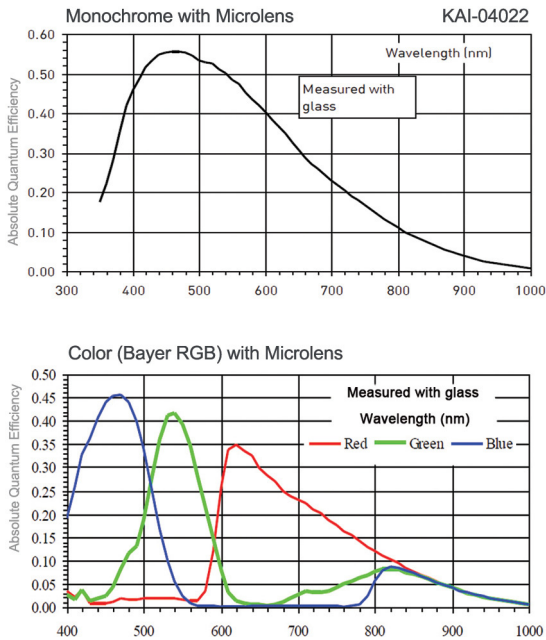
IGV-B2020M-TFO Monochrome GigE Vision Output
IGV-B2020C-TFO Color GigE Vision Output

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

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

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

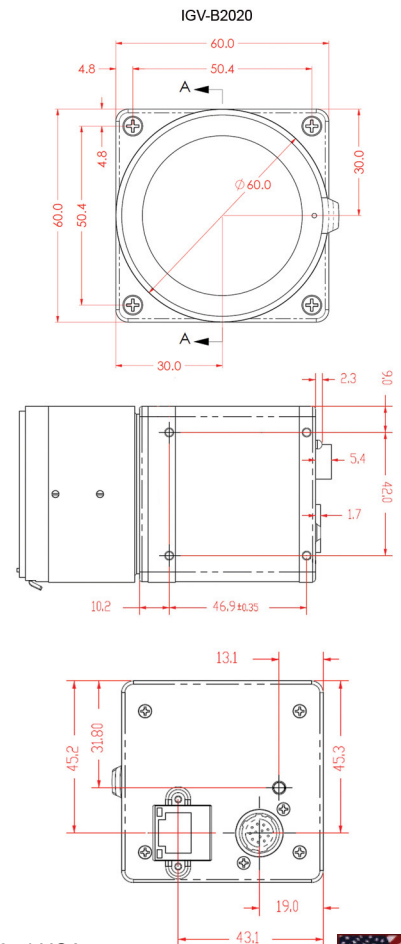
Software: Pleora GEVPlayer, IMPERX GEV Player (includes Cam-Config GUI), Bobcat GEV Download Utility, Net Command

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

Mechanical Dimensions



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