

# BOBCAT

## INTELLIGENT CAMERA SERIES

# IGV-B6620



**IMPERX IGV-B6620** 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-29050 5.5 micron interline transfer CCD image sensor with a 35mm image diagonal format.

IMPERX IGV-B6620 provides an image resolution of 6600 x 4400 and delivers up to 2.5 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

6600/6576 x 4400/4384

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

Normal and over-clock operation (1.8/2.5 fps)

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-B6620 Specifications

Maximum Resolution	6600 x 4400
Sensor Type	35mm CCD KAI-29050
Pixel Size	5.50 $\mu$ m
Frame Rate	1.8/2.5 fps (normal/overclock)
Max Frame Rate	13 FPS
Minimum S/N ratio	60 db
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)
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
Strobe Output	Programmable position and duration
Image Overlay	Yes, Programmable
RS232 Interface	Yes

Hardware Trigger	LVTTTL or TTL via IN1/IN2, optically isolated, level, edge, pulse-width, programmable
Software Trigger	Software internal, level, edge, pulse-width, programmable
Trigger Modes	Programmable, standard, double exposure, fast, frame accumulation, asynchronous
Data Corrections	DPC, HPC, LUT, FFC
Min. Illumination	1 Lux, F/1.4
Supply Input Range	12 VDC, (10 V – 15 V)
Power Consumption	5.6 W, 300mA steady, 1.5A rush
Size (W x H x L)	60 x 60 x 68mm
Weight	400g
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
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:

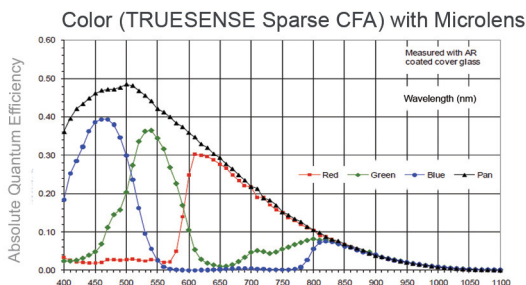
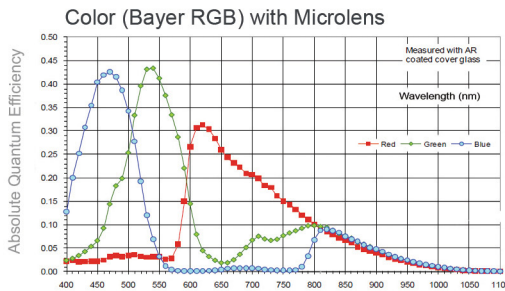
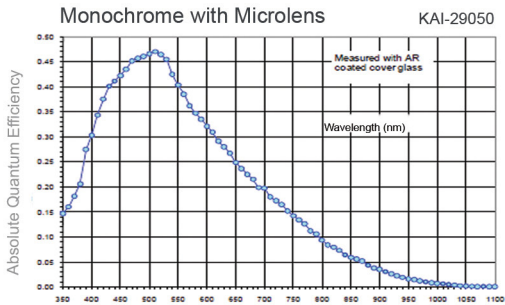
IGV-B6620M-TFO	Monochrome GigE Vision Output
IGV-B6620C-TFO	Color GigE Vision Output
IGV-B6620T-TFO	TRUESENSE Sparse CFA GigE Vision Output

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

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)

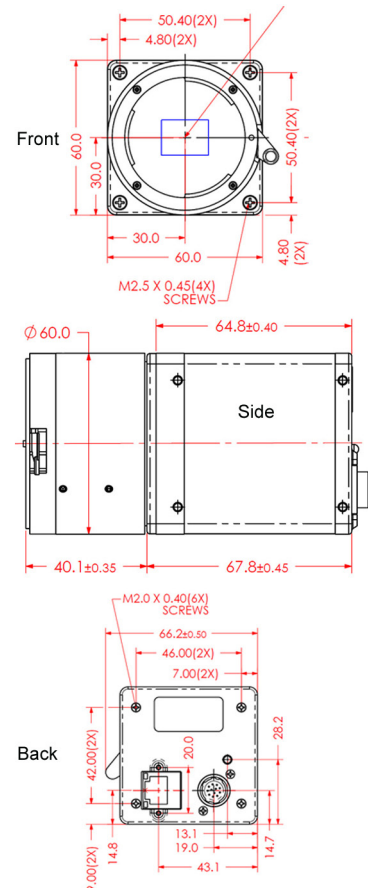
Software: Pleora GEVPlayer, IMPERX GEV Player (includes Cam-Config GUI), Bobcat GEV Download Utility, Net Command

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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