

BOBCAT

INTELLIGENT CAMERA SERIES



ICX-B0620



IMPERX ICX-B0620 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-0340 7.4 micron interline transfer CCD image sensor with a 1/3" optical format.

IMPERX ICX-B0620 provides an image resolution of 648 x 488 and delivers up to 260 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 CoaXPRESS (CXP) camera a perfect fit for the most demanding industrial, medical, scientific and military applications. This camera is also available with Camera Link® or GigE Vision® interfaces.

Features

648/640 x 488/480

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

Normal and over-clock operation (210/260 fps)

CoaXPRESS with PoCXP support

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)

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 ICX-B0620 Specifications

Maximum Resolution	648 x 488
Sensor Type	1/3" CCD KAI-0340
Pixel Size	7.40 µm
Frame Rate	208/260 fps (normal/overclock)
Max Frame Rate	2164 FPS
Minimum S/N ratio	60 db
Video Output	CoaXPress with PoCXP
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 648 x 488
Shutter Speed	1/500,000 to 1/110 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
Cam Configuration	Gen<i>C</i>Cam

Data Corrections	DPC, HPC, LUT
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
Power Consumption	3.6 W, 150 mA @ 24V steady, 1.5 A inrush
Size (W x H x L)	46 x 46 x 54mm
Weight	190g
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	660,000 hours @ 40°C
Regulatory	FCC 15 part A, CE, RoHS

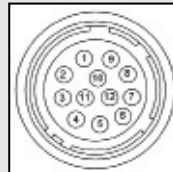
I/O Interface:



1 N/C	7 OUT1 Signal
2 N/C	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)

Lens Control:



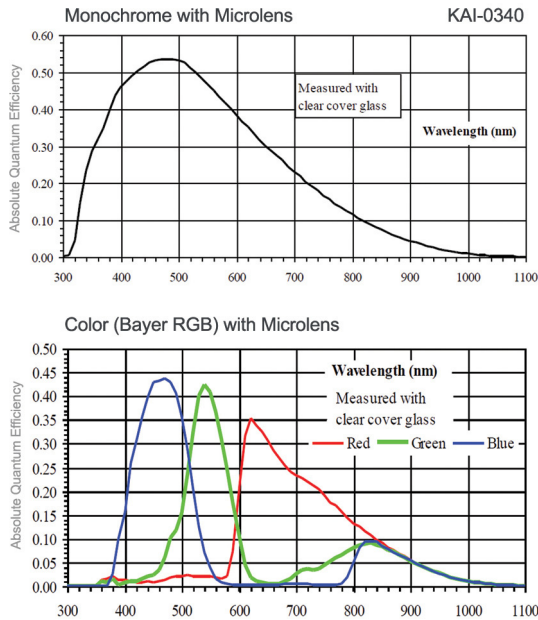
1 IRIS Return	7 Lens CTRL4
2 IRIS VCC	8 Lens CTRL5
3 IRIS Video	9 Lens CTRL6
4 Lens CTRL1	10 AUX UART COM
5 Lens CTRL2	11 AUX UART RX
6 Lens CTRL3	12 AUX UART TX

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

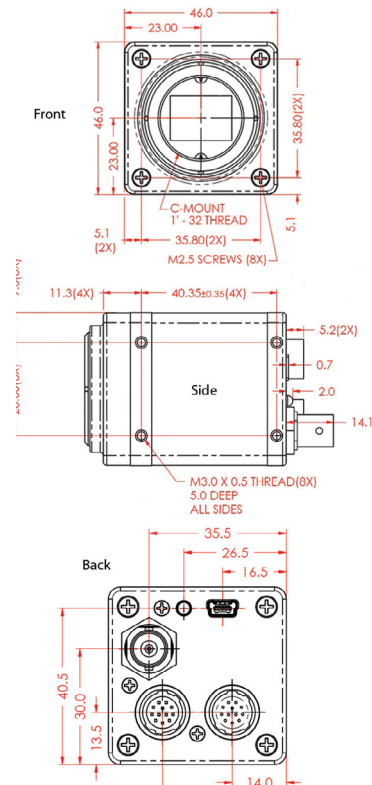
Order Options: ICX-B0620M-TCO Monochrome CoaXPress Output
ICX-B0620C-TCO Color CoaXPress Output

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

Spectral Response



Mechanical Dimensions



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