

BOBCAT

INTELLIGENT CAMERA SERIES



ICX-B1410



IMPERX ICX-B1410 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 Sony's ICX-285 6.45 micron interline transfer CCD image sensor with a 2/3" optical format.

IMPERX ICX-B1410 provides an image resolution of 1392 x 1040 and delivers up to 30 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 hrs @ 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

- 1392/1360 x 1040/1024
- Mono and color - 8/10/12/14-bit data
- Normal and over-clock operation (23/30 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) (optional)
- 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 ICX-B1410 Specifications

Maximum Resolution	1392 x 1040
Sensor Type	2/3" CCD ICX 285
Pixel Size	6.45 μ m
Frame Rate	23/30 fps (normal/overclock)
Max Frame Rate	190 FPS
Minimum S/N ratio	60 db
Video Output	CoaXPress with PoCXP
Output Format	8, 10, 12, 14 bit single, 3x8 RGB
Binning H & V	x1, x2, x3, x4, x8
Area of Interest	8 independent AOIs, 2 x 2 to 1392 x 1040
Shutter Speed	1/500,000 to 1/23 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>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	0.2 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

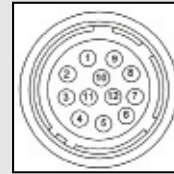
I/O Interface:



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:



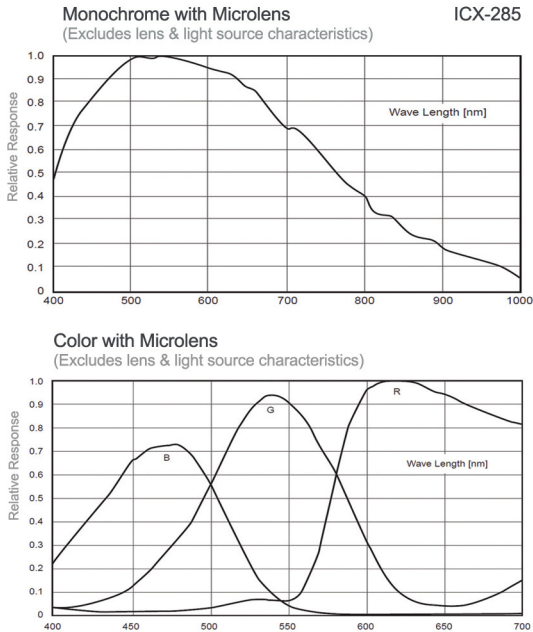
1 IRIS Return	7 Lens CTRL4
2 IRIS VCC	8 Lens CTRL5
3 IRIS Video	9 Lens CTRL6
4 Lens CTRL1	10 AUX UART COM
5 Lens CTRL2	11 AUX UART RX
6 Lens CTRL3	12 AUX UART TX

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

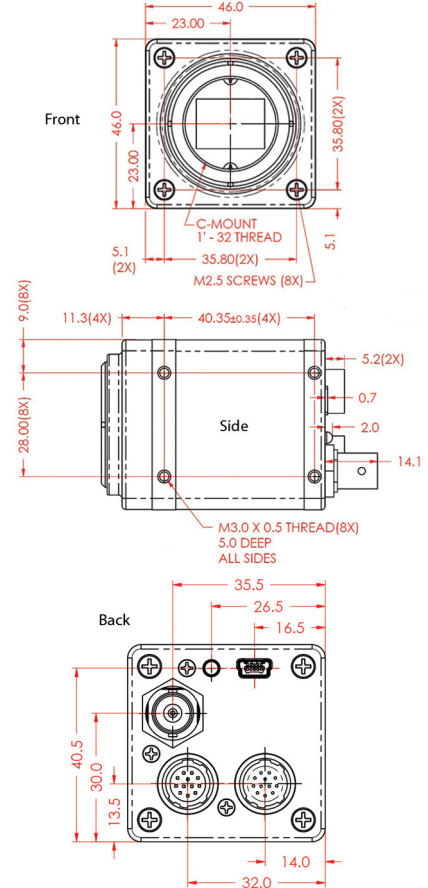
Order Options: ICX-B1410M-SCO Monochrome CoaXPress Output
ICX-B1410C-SCO Color CoaXPress Output

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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