IMPERX

BOBCAT
INTELLIGENT CAMERA SERIES

IGV-B1610
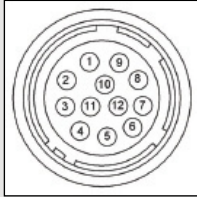
IMPERX IGV-B1610 is an advanced progressive scan, fully programmable CCD camera designed for imaging applications that require high quality images, powerful features and flexibility. The camera is small, light weight, and built around SONY´s ICX-274 4.4 micron interline transfer CCD image sensor with a 1.1/8" optical format.

IMPERX IGV-B1610 provides an image resolution of 1628 x 1236 and delivers up to 25 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

1628/1620 x 1236/1220
Mono or color 8, 10, 12, 16 or RGB 24 bit single output
Normal and over-clock operation (17/25 fps)
Ethernet output, GigEVision and GeniCam support
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)
Reverse image (H mirror) (optional)
MTBF of 660,000 hours @ 40°C

APPLICATIONS

Aerial Mapping	Automotive	Flat Panel Inspection	Metrology	Robotics
Aerial Robots: Military, Police	Biometrics	Food/Beverage	Microscopy	Scientific Apps
Aerospace	Broadcasting	Homeland Security	Military/Defense	Surveillance
Agriculture	Printed Circuit Board (PCB)	Law Enforcement	Pharmaceuticals	Semiconductors
Automation	Electronics	Intelligent Traffic Systems (ITS)	Particle Image Velocimetry (PIV)	Transportation
	Energy/Solar/Wind Power	Medical Devices/Imaging	Radiology	Textile/Apparel

IMPERX™

BOBCAT IGV-B1610 Specifications

Maximum Resolution	1628 x 1236	Data Corrections	DPC, HPC, LUT
Sensor Type	1/1.8" CCD ICX-274	Hardware Trigger	LVTTL or TTL via IN1/IN2, level, edge, pulse-width, programmable
Pixel Size	4.40 µm		
Frame Rate	17/25 fps (normal/overclock)	Software Trigger	Software, internal, level, edge, pulse-width, programmable
Max Frame Rate	212 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 or color 8, 10, 12, 16 or RGB 24 bit single output	Min. Illumination	0.5 Lux, F/1.4
		Supply Input Range	12 VDC, (10 V – 15 V)
Binning H & V	x1, x2, x3, x4, x8	Power Consumption	4.6 W, 350 mA steady (Typ), 1.5 A inrush
Area of Interest	8 independent AOIs, 2 x 2 to 1628 x 1236	Size (W x H x L)	46 x 46 x 63mm
Shutter Speed	1/200,000 to 1/17 sec (nom)	Weight	192g
Long Integration	Up to 16 sec	Lens Mount	C-Mount
Gamma Correction	G=1.0, G= 0.45, user upgradable LUT	Vibration, Shock	10G (20 - 200)Hz XYZ, 70G
Video Gain	36 dB range, 1024 steps, 0.0351 dB per step	Environmental	Operation: (-40° to +85°)C Storage: (-40° to +90°)C
Exposure and AGC	Manual, Auto, Programmable		
Iris Control	Auto, Programmable	Humidity	10% to 90% non-condensing
Strobe Output	Programmable position and duration	MTBF	660,000 hours @ 40°C
Image Overlay	Yes, Programmable	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)
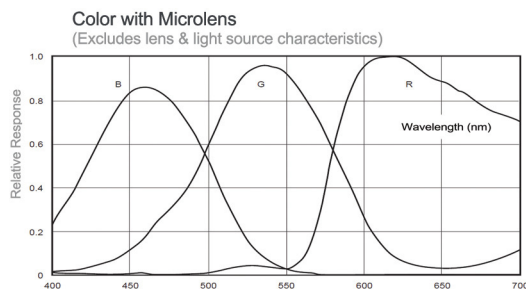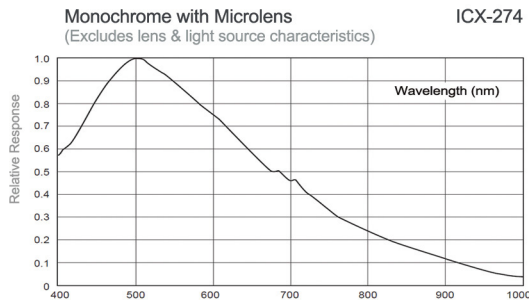
Order Options:

IGV-B1610M-SCO   Monochrome GigE Vision Output
IGV-B1610C-SCO   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 | Mechanical Dimensions

Monochrome with Microlens   ICX-274
(Excludes lens & light source characteristics)

Color with Microlens
(Excludes lens & light source characteristics)

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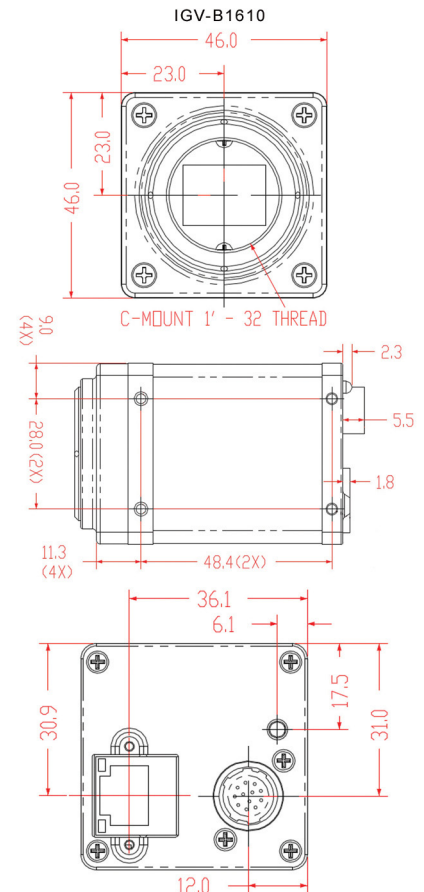
Software: Pleora GEVPlayer, IMPERX GEV Player(includes CamConfig GUI), Bobcat GEV Download Utility, Net Command

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