ICL-B6640

IMPERX ICL-B6640 is an advanced progressive scan, fully programmable CCD camera designed for imaging applications that require high speed, brilliant images, powerful features and flexibility. The camera is small, light weight, and built around the TRUESENSE Imaging KAI-29050, 4-tap, 5.5 micron interline transfer CCD image sensor with a 43.47mm optical format.

IMPERX ICL-B6640 provides an image resolution of 6600 x 4400 and delivers up to 4.65 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 Camera Link® camera a perfect fit for the most demanding industrial, medical, scientific and military applications.

Features

6600 x 4400
Mono, color, or TRUESENSE Sparse CFA 8, 10, 12 bit data
Normal and over-clock operation (3.47/4.65 fps)
Base or Medium Camera Link
RS232 serial communication
Analog and digital gain and offset control
1x, 2x, 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	Automotive	Flat Panel Inspection	Metrology
Aerial Robots: Military, Police	Biometrics	Food/Beverage	Microscopy
Aerospace	Broadcasting	Homeland Security	Military/Defense
Agriculture	Printed Circuit Board (PCB)	Law Enforcement	Pharmaceuticals
Automation	Electronics	Intelligent Traffic Systems (ITS)	Particle Image Velocimetry (PIV)
	Energy/Solar/Wind Power	Medical Devices/Imaging	Radiology

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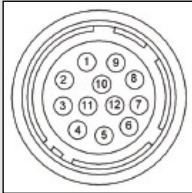contact@sacasa.info - www.sacasa.info

BOBCAT ICL-B6640 Specifications

	6600 x 4400
Sensor Type	CCD KAI-29050; 43.47mm optical format
Pixel Size	5.50 µm
Frame Rate	3.47/4.65 fps (normal/overclock)
Max Frame Rate	26 FPS
Minimum S/N ratio	60 db
Video Output	Base or Medium Camera Link, mini CL interface
Output Format	Mono, color, or TRUESENSE Sparse CFA 8, 10, 12 bit quad
Binning H & V	1x, 2x, 4x, 8x
Area of Interest	8 independent AOIs, 2 x 2 to 6600 x 4400
Shutter Speed	1/125,000 to 1/3.5 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

Data Corrections	DPC, HPC, LUT, FFC
Hardware Trigger	LVTTL 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
Supply Input Range	12 VDC, (10V min, 33V max)
Power Consumption	7.8 W, 650 mA steady, 1.5 A inrush
Size (W x H x L)	60 x 60 x 53mm
Weight	360g
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	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

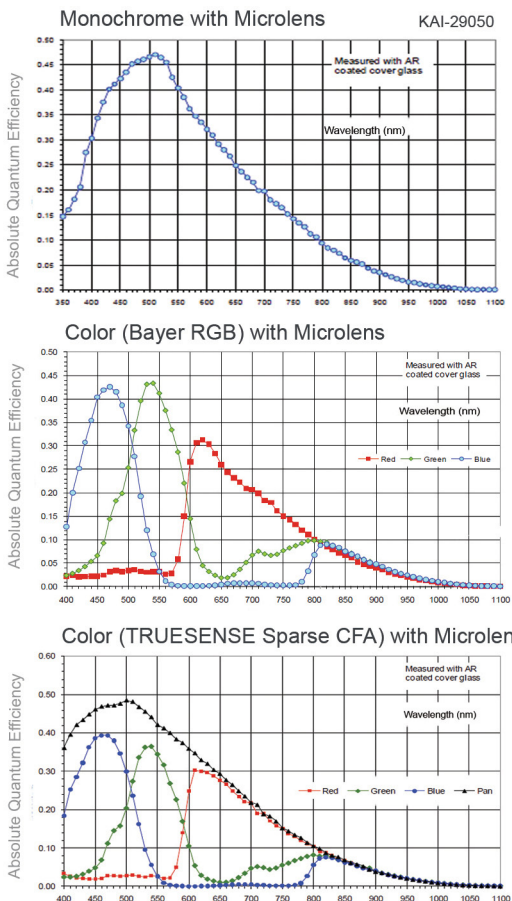Connector: Hirose HR 10A-10R-12PB(71)

Order Options:

ICL-B6640M-TFO	Monochrome Camera Link Output
ICL-B6640C-TFO	Color Camera Link Output
ICL-B6640T-TFO	TRUESENSE Sparse CFA Camera Link Output

Accessories:
PS12V04: Power Supply (sold separately)

Spectral Response

Monochrome with Microlens — KAI-29050

Color (Bayer RGB) with Microlens

Color (TRUESENSE Sparse CFA) with Microlens

Software/Drivers/Interface

Mechanical Dimensions

OPTIONAL EXTERNAL HEAT SINKS AVAILABLE