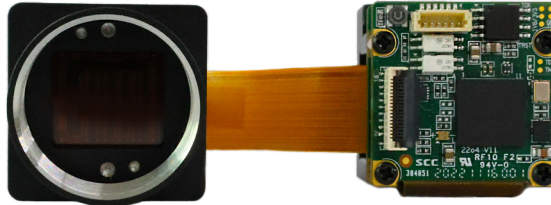


VE2S-230-168U3M/C-S J150

VENUS Super Series 2.3MP CMOS USB3.0 Area Scan Camera



VE2S-230-168U3M/C-S J150 is DAHENG IMAGING's industry camera of VENUS family. The camera uses design of "Acquisition board + FPC cable + Imaging board", which provides more flexibility for embedded visual applications.

VE2S-230-168U3M/C-S J150 camera is a monochrome/color USB3.0 Vision camera with the Sony IMX174 CMOS sensor, featuring outstanding performance, ease of installation and use.

Applications

Suitable for machine vision applications such as industrial inspection, medical, scientific research, education and so on.

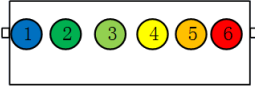
Features

- FPC cable: 5cm / 10cm / 20cm optional
- Support ROI, Gain, auto gain, exposure, auto exposure
- Binning, Decimation, Gamma, Black Level, Digital Shift
- Color models support Light source preset, Color Transformation Control and Saturation
- Static Defect Correction
- Monochrome models support Sharpness and Noise Reduction
- Timer, Counter, LUTs and User Set Control
- Remove Parameter Limit
- 512KB data storage area

Specifications

Model	VE2S-230-168U3C-S J150	VE2S-230-168U3M-S J150
Resolution	1920(H) × 1200(V)	
Sensor	Sony IMX174 Global shutter CMOS	
Sensor Format	1/1.2"	
Pixel Size	5.86μm × 5.86μm	
Frame Rate	168 fps	
ADC	10 bit, 12 bit	
Pixel Bit Depth	8 bit, 10 bit, 12 bit	
Mono/Color	Color	Mono
Pixel Formats	Bayer RG8 / Bayer RG10 / Bayer RG12	Mono8 / Mono10 / Mono12
SNR	45.3 dB	45.2 dB
Exposure Time	Standard: 20μs ~ 1s, Actual Steps: 1 row period	
Gain	0dB ~ 24dB, Default: 0dB, Step: 0.1dB	
Binning	1×1, 1×2, 1×4, 2×1, 2×2, 2×4, 4×1, 4×2, 4×4	
Decimation	FPGA: 1×1, 1×2, 1×4, 2×1, 2×2, 2×4, 4×1, 4×2, 4×4	
Synchronization	Hardware trigger, software trigger	
Acquisition Mode	Single frame, Continuous, Software trigger, Hardware trigger	
Reverse X/Y	Reverse X/Y	
I/O Interface	1 optical isolation input, 1 optical isolation output, 2 bidirectional GPIOs	
Data Interface	USB3.0 (vertical FPC)	
Power Supply	USB 3.0 bus	
Typical Power	2.2 W @ 5 VDC	
Operating Temp.	0° C ~ +45° C	
Storage Temp.	-20° C ~ +70° C	
Operating Humidity	10% ~ 80%	
Lens Mount	C	
Dimensions	C-mount: 31(W) × 29(H) × 22.4(L) mm Acquisition Board: 29(W) × 30(H) × 29.4(L) mm	
Weight	30 g	
Software	3rd-party software such as HALCON, MERLIC and LabVIEW	
OS	32bit / 64bit Windows, Linux, Android, ARMv7, ARMv8	
Conformity	CE, RoHS, USB3 Vision®, GenICam®	

I/O Connector

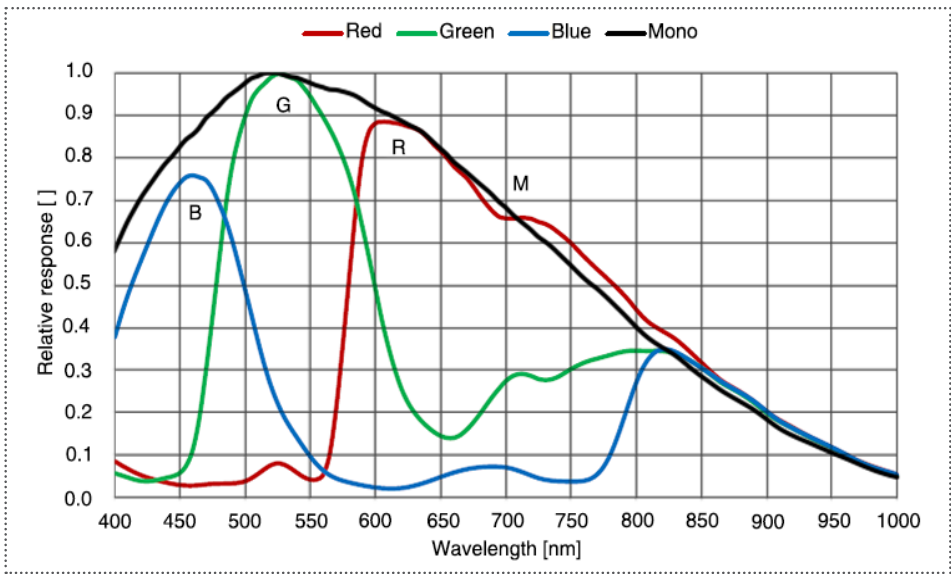
	Pin	Definition	Description
	1	Line3	GPIO Input/Output
	2	Line0+	Opto-isolated input +
	3	Line2	GPIO Input/Output
	4	Line1+	Opto-isolated output +
	5	Line0/1-	Opto-isolated input/output -
	6	GND	GPIO Ground

FPC Connector

Connector model: TF38-18S-0.5SV

Pin	Definition	Description	Pin	Definition	Description
1	GND	Ground	10	NC	NC
2	SSRX_P	USB3.0 Differential data	11	GND	Ground
3	GND	Ground	12	USB2D_P	USB2.0 Differential data
4	SSRX_N	USB3.0 Differential data	13	GND	Ground
5	GND	Ground	14	USB2D_N	USB2.0 Differential data
6	SSTX_P	USB3.0 Differential data	15	GND	Ground
7	GND	Ground	16	GND	Ground
8	SSTX_N	USB3.0 Differential data	17	Vbus	VBUS Power
9	GND	Ground	18	Vbus	VBUS Power

Spectral Response



Technical drawings of the 1-32-UN-2B camera module showing front, side, and top views with dimensions in mm.

Front View: Shows the camera lens and mounting bracket. Dimensions include a lens diameter of $\varnothing 28$ mm, a mounting bracket width of 20 mm, and a total width of 37.3 mm. The mounting bracket has a depth of 4.5 mm.

Side View: Shows the camera module's profile. Dimensions include a total height of 152.53 mm, a mounting bracket height of 13.2 mm, and a lens diameter of $\varnothing 28$ mm.

Top View: Shows the camera module's top surface. Dimensions include a total width of 29.4 mm, a mounting bracket width of 22.4 mm, and a lens diameter of $\varnothing 28$ mm. The mounting bracket has a depth of 4.5 mm.

Bottom View: Shows the camera module's bottom surface. Dimensions include a total width of 29 mm, a mounting bracket width of 20 mm, and a lens diameter of $\varnothing 28$ mm. The mounting bracket has a depth of 4.5 mm.

Isometric View: Shows the camera module from an isometric perspective. Dimensions include a total width of 29 mm, a mounting bracket width of 20 mm, and a lens diameter of $\varnothing 28$ mm. The mounting bracket has a depth of 4.5 mm.

Units: mm

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