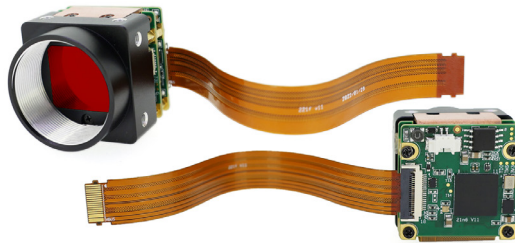


VEN-303-107U3M/C-FPC

VENUS Series 3MP CMOS USB3.0 Area Scan Camera



USB[®]
VISION

GEN*i*CAM



The all-in-one board level camera is a major member of DAHENG IMAGING's VENUS family industry camera, providing an excellent good choice for users with minimal space, low weight, low power consumption and low heat.

The VEN-303-107U3M/C-FPC is a monochrome/color USB3.0 Vision camera with Sony CMOS sensor, featuring flexible installation, powerful extensibility and suitable for limited space application.

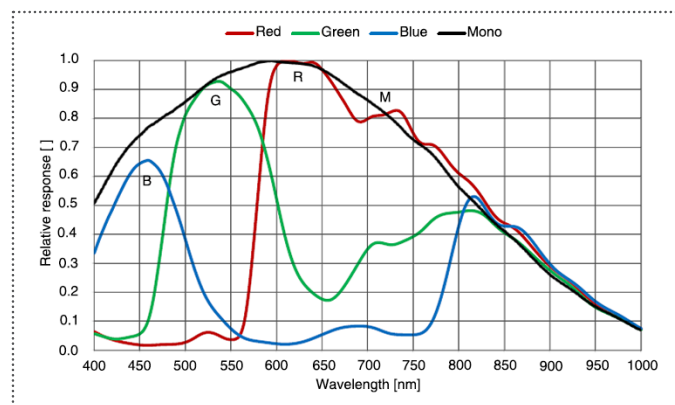
Applications

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

Features

- FPC cable: 10cm / 20cm / 50cm optional
- Gamma, Decimation, Binning, Black Level, Digital Shift
- Color models support Light source preset, Color Transformation Control and Saturation
- Monochrome models support Sharpness and Noise Reduction
- The Sequencer Control supports multiple sets of parameters configuration
- Timer, Counter, LUTs and User Set Control
- Support Remove Parameter Limit to expand the range of exposure, gain, white balance, and so on
- 16KB data storage area for saving algorithm coefficients and parameter configuration
- 512KB ROM area for storing large amounts of data and files

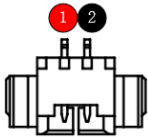
Spectral Response



Specifications

Model	VEN-303-107U3C-FPC	VEN-303-107U3M-FPC
Resolution	2048(H) × 1536(V)	
Sensor	Sony Global shutter CMOS	
Sensor Format	1/1.8"	
Pixel Size	3.45μm × 3.45μm	
Frame Rate	107.6 fps	
ADC	12 bit	
Pixel Bit Depth	8 bit, 12 bit	
Mono/Color	Color	Mono
Pixel Formats	Bayer RG8 / Bayer RG12	Mono8 / Mono12
SNR	40.56 dB	40.62 dB
Exposure Time	UltraShort: 1μs ~ 100μs , Actual Steps: 1μs Standard: 20μs ~ 1s , Actual Steps: 1 row period;	
Gain	0dB ~ 24dB, Default: 0dB, Steps: 0.1dB	
Binning	FPGA: 1×1, 1×2, 1×4, 2×1, 2×2, 2×4, 4×1, 4×2, 4×4 Sensor: 1×1, 1×2 (only for mono model)	
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 programmable GPIO	
Data Interface	USB3.0 (horizontal FPC)	
Power Supply	Powered by the USB 3.0 bus	
Typical Power	2.59 W @ 5VDC	
Operating Temp.	0° C ~ +45° C	
Storage Temp.	-20° C ~ +70° C	
Operating Humidity	10% ~ 80%	
Lens Mount	C	
Dimensions	29(W) × 29(H) × 25.1 ± 1(L) mm (without C Mount)	
Weight	36 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

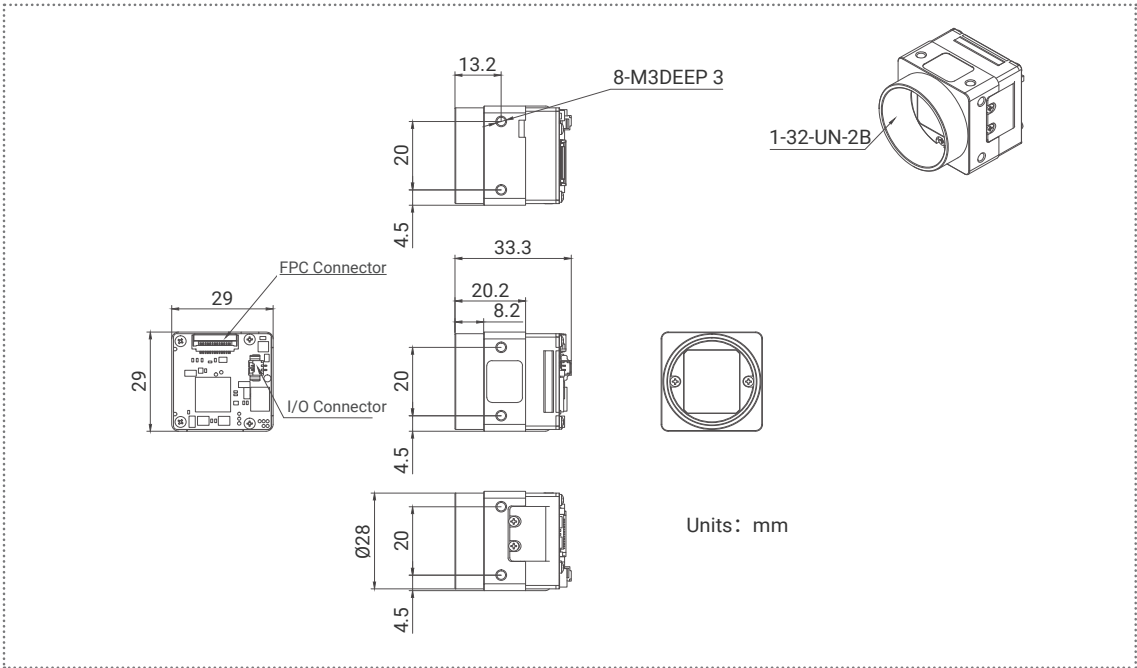
	Pin	Definition	Description
	1	Line2	GPIO Input/Output
	2	GND	GPIO Ground

FPC Connector

Connector model: TF31-18S-0.5SH(800)

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

Technical Drawing



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