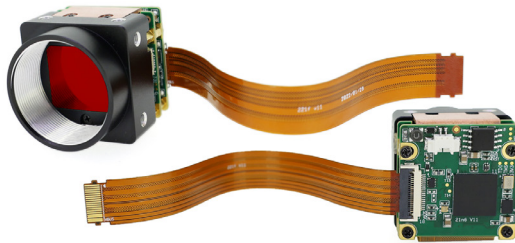


# VEN-301-125U3M/C-FPC

## VENUS Series 3MP CMOS USB3.0 Area Scan Camera



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-301-125U3M/C-FPC is a monochrome/color USB3.0 Vision camera with Sony IMX252 CMOS sensor, featuring flexible installation, powerful extensibility and suitable for limited space application.

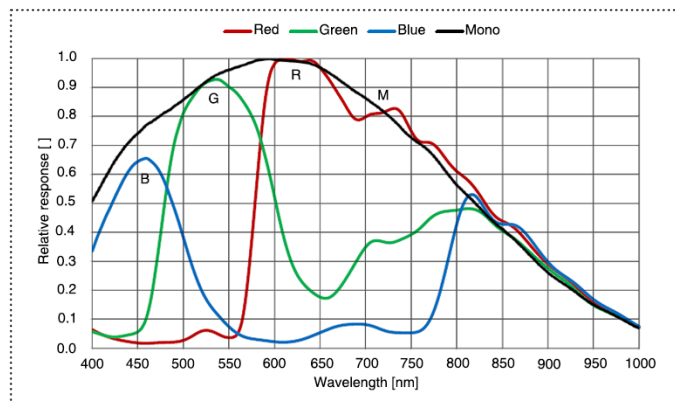
### Applications

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

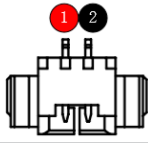
### Spectral Response



## Specifications

Model	VEN-301-125U3C-FPC	VEN-301-125U3M-FPC
Resolution	2048(H) × 1536(V)	
Sensor	Sony IMX252 Global shutter CMOS	
Sensor Format	1/1.8"	
Pixel Size	3.45μm × 3.45μm	
Frame Rate	125 fps	
ADC	10 bit	
Pixel Bit Depth	8 bit, 10 bit	
Mono/Color	Color	Mono
Pixel Formats	Bayer RG8 / Bayer RG10	Mono8 / Mono10
SNR	40.63 dB	40.55 dB
Exposure Time	Standard: 20μs ~ 1s , Actual Steps: 1 row period; UltraShort: 1μs ~ 100μs , Actual Steps: 1μs	
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	Sensor: 1×1, 2×2	
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	2.48 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

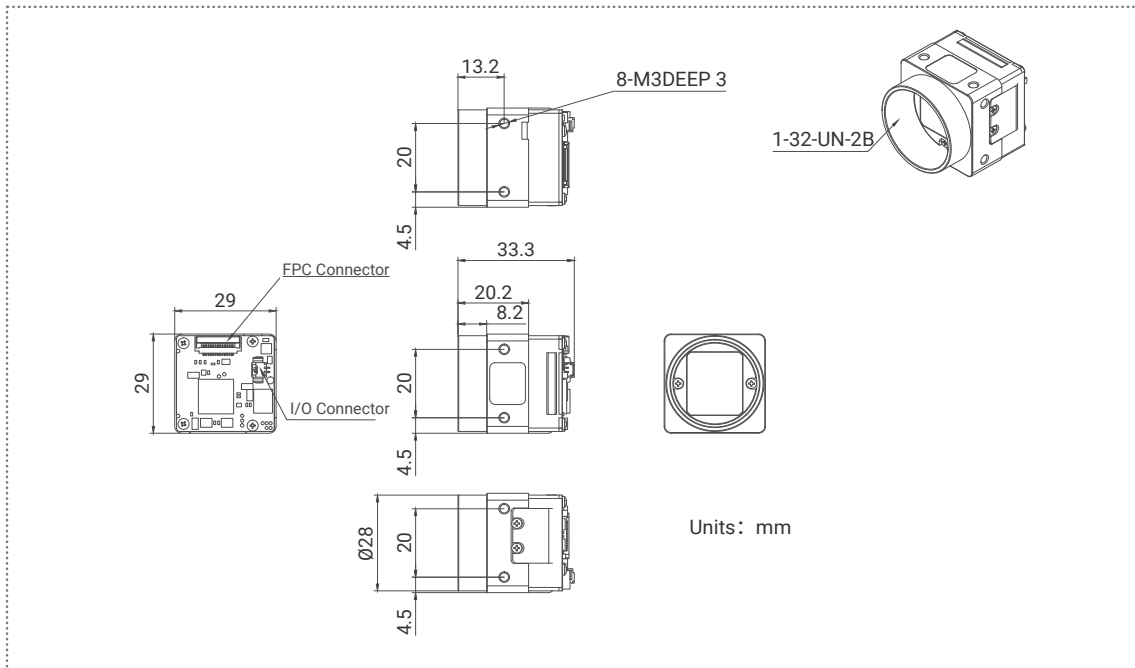
	Pin	Definition	Description
	1	Line2	GPIO Input/Output
2	GND	GPIO Ground	

### 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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