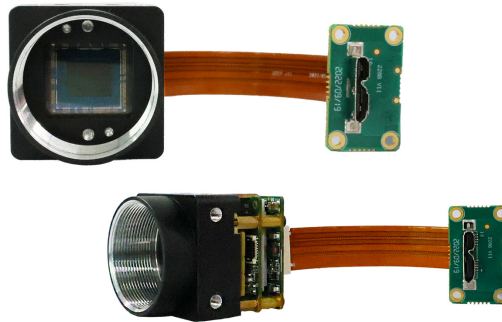


VE2S-501-79U3M/C-S

VENUS Super Series 5MP CMOS USB3.0 Area Scan Camera



VE2S-501-79U3M/C-S is DAHENG IMAGING's industry camera of VENUS family. The camera uses design of "Camera body + FPC cable + Micro-B adapter board", which provides more flexibility for embedded visual applications.

VE2S-501-79U3M/C-S camera is a monochrome/color USB3.0 Vision camera with the Sony 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.

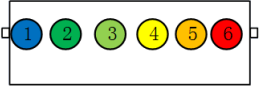
Features

- FPC cable: 5cm / 10cm / 20cm optional
- Burst Mode
- The Sequencer Control supports multiple sets of parameters configuration
- Two exposure time modes: standard exposure time mode / UltraShort exposure time mode
- Support Decimation, Gamma, Binning, Black Level, Digital Shift
- Color models support Light source preset, Color Transformation Control and Saturation
- Monochrome models support Sharpness and Noise Reduction
- Timer, Counter, LUTs and User Set Control
- Support Remove Parameter Limit to expand the range of exposure, gain, white balance, and so on
- 16KB and 512KB data storage area

Specifications

Model	VE2S-501-79U3C-S	VE2S-501-79U3M-S
Resolution	2448(H) × 2048(V)	
Sensor	Sony Global shutter CMOS	
Sensor Format	2/3"	
Pixel Size	3.45μm × 3.45μm	
Frame Rate	78.9 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, 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 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 optical isolation input, 1 optical isolation output, 2 bidirectional GPIOs	
Data Interface	USB3.0 (vertical FPC)	
Power Supply	USB 3.0 bus	
Typical Power	2.59 W @ 5 VDC	
Operating Temp.	0° C ~ +45° C	
Storage Temp.	-20° C ~ +70° C	
Operating Humidity	10% ~ 80%	
Lens Mount	C	
Dimensions	31(W) × 29(H) × 39.3(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

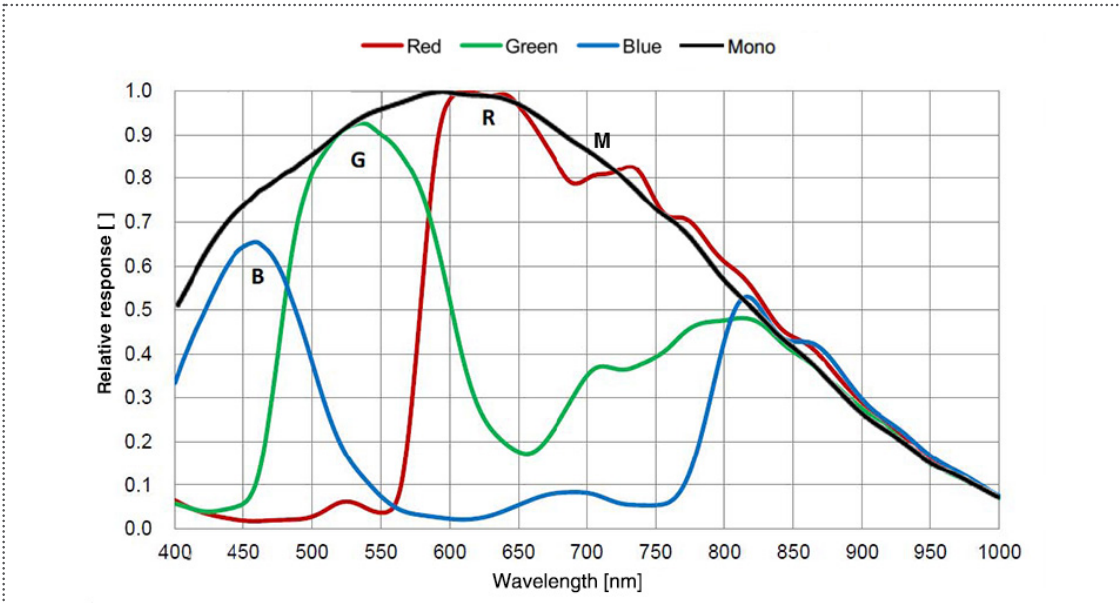
	Pin	Definition	Description
	1	Line3	GPIO Input/Output
	2	Line0+	Opto-isolated input +
	3	Line2	GPIO Input/Output
	4	Line1+	Opto-isolated output +
	5	Line0/1-	Opto-isolated input/output -
	6	GND	GPIO Ground

FPC Connector

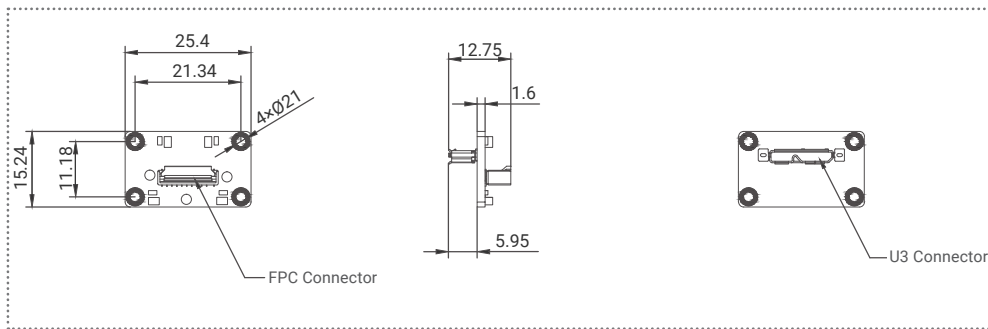
Connector model: TF38-18S-0.5SV

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

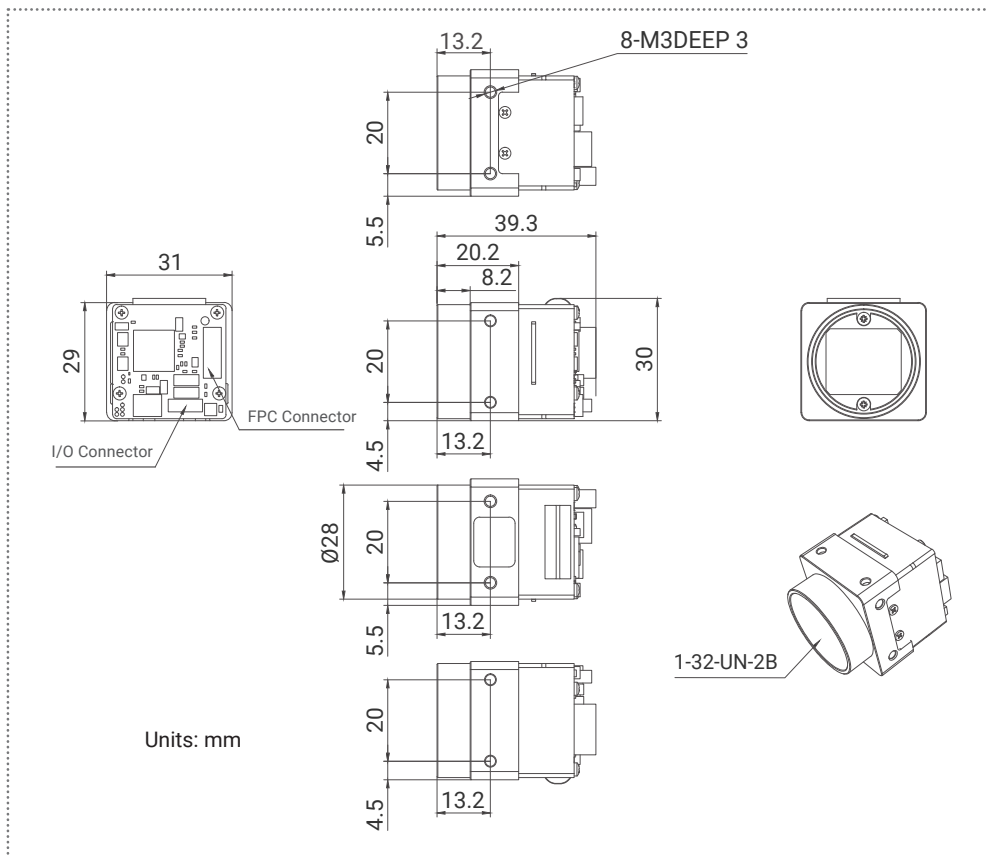
Spectral Response



Technical Drawing



Micro-B adapter board



VE2S-501-79U3M/C-S

China Daheng Group, Inc. Beijing Image Vision Technology Branch

12F Daheng Science & Technology Tower, No.3 Suzhou Street, Haidian District, Beijing China, 100080

Tel: +86 10 82828878

E-mail: isales@daheng-imaging.com