

ME2S-2020-19U3M/C

MERCURY2 Super Series 20.2MP CMOS USB3.0 Area Scan Camera



The ME2S-2020-19U3M/C camera is a monochrome/color USB3.0 Vision camera with the Sony's latest 4th generation "Pregius S" CMOS sensor and higher performance FPGA. The ME2S-2020-19U3M/C camera has opto-isolated I/Os that adapt to specific needs. Four-side mounting holes provide maximum installation flexibility for ME2S-U3. Thanks to the extremely compact (29mm × 29mm), robust metal housings and locking screw connectors, the MERCURY2 Super cameras can secure the reliability of cameras deployed in harsh environments.

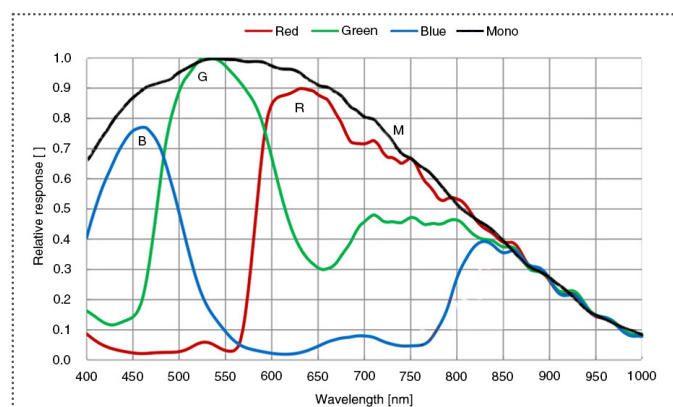
Applications

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

Features

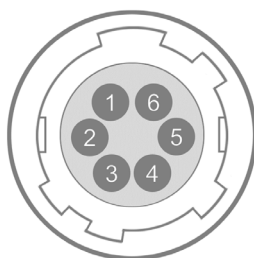
- Two exposure time modes: Standard exposure time mode / UltraShort exposure time mode
- Acquisition Burst Mode
- Support Gamma, Binning, Decimation, Digital Shift, Black Level and Flat Field Correction
- Color models support Light source preset, Color Transformation Control and Saturation
- Monochrome models support Sharpness and Noise Reduction
- Programmable LUTs and User Set Control
- Support Timer and Counter
- Support Remove Parameter Limit to expand the range of exposure, gain, white balance, and so on
- 16KB User Data Area for saving algorithm coefficients and parameter configuration

Spectral Response



Specifications

Model	ME2S-2020-19U3C	ME2S-2020-19U3M
Resolution	4504(H) × 4504(V)	
Sensor	Sony IMX541 Global shutter CMOS	
Sensor Format	1.1"	
Pixel Size	2.74μm × 2.74μm	
Frame Rate	19.4 fps (Max. frame rate: 26.07fps @ Acquisition Burst Mode)	
ADC	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	40.6 dB	42.1 dB
Exposure Time	UltraShort: 1μs ~ 2.4μs, Actual Steps: 1μs; Standard: 3μs ~ 1s, Actual Steps: 1 row period (decimation enabled/3μs~20μs), 1μs (>20μs)	
Gain	0dB ~ 24dB; Default: 0dB, Steps: 0.1dB	
Binning	1 × 1, 1 × 2, 1 × 4, 2 × 1, 2 × 2, 2 × 4, 4 × 1, 4 × 2, 4 × 4	
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 input and 1 output with opto-isolated, 1 programmable GPIO	
Data Interface	USB3.0	
Power Supply	12VDC-10%~24VDC+10% supplied via the camera's 6-pin Hirose connector (recommend) or power over USB3.0	
Typical Power	3.93 W @ 5 VDC	
Operating Temp.	0° C ~ +45° C	
Storage Temp.	-20° C ~ +70° C	
Operating Humidity	10% ~ 80%	
Lens Mount	C	
Dimensions	29(W) × 29(H) × 38.8(L) mm (without lens adapter or connectors)	
Weight	60 g	
Software	3rd-party software such as HALCON, MERLIC and LabVIEW	
OS	32bit / 64bit Windows, Linux, Android, ARMv7, ARMv8	
Conformity	CE, RoHS, FCC, ICES, UKCA, USB3.0 Vision®, GenICam®	



Pin	Definition	Description
1	POWER_IN	Camera external power, +12V DC(-10%)~+24V DC(+10%)
2	Line0+	Opto-isolated input +
3	Line2	GPIO input/output
4	Line1+	Opto-isolated output +
5	Line0-/Line1-	Line0-: Opto-isolated input - Line1-:Opto-isolated output -
6	GND	PWR GND & GPIO GND

