

MER3-2020-42X2M/C

MERCURY3 20MP CMOS CXP2.0 Area Scan Camera



The MER3-2020-42X2M/C camera is equipped with global shutter sensor and uses CoaXPress2.0 interface for high-speed transmission of image data, featuring high quality images, extremely low power, small housing, and stable operating capability. The camera is capable of 12.5Gbit/s maximum transfer data rate, support PoCXP and can secure the reliability of cameras deployed in harsh industrial environments. The cameras are industrial cameras with high reliability, high transmission speed and high image quality.

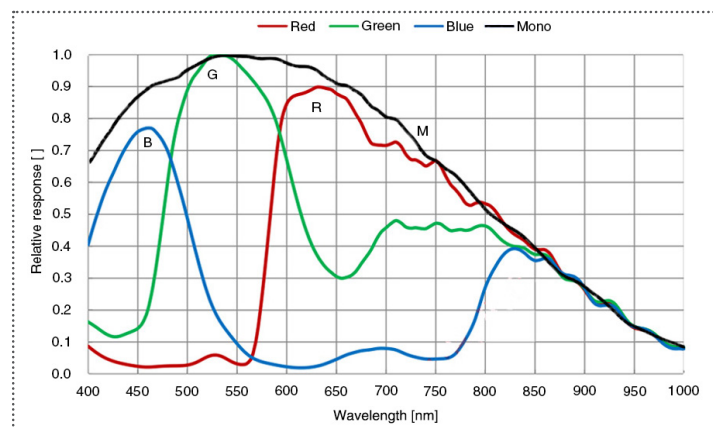
Applications

Suitable for machine vision applications such as new energy inspection, PCB inspection, assembly verification, consumer electronics and so on.

Features

- The Sequencer Control supports multiple sets of parameters configuration
- Color models support Light Source Preset, Color Transformation Control, Saturation and Hue
- Brightness, Contrast, Gamma, Sharpness and Flat Field Correction
- Black Level, Timer, Counter, LUTs and User Set Control
- DAHENG IMAGING or third-party frame grabbers are available

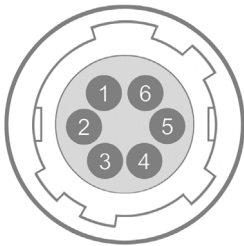
Spectral Response



Specifications

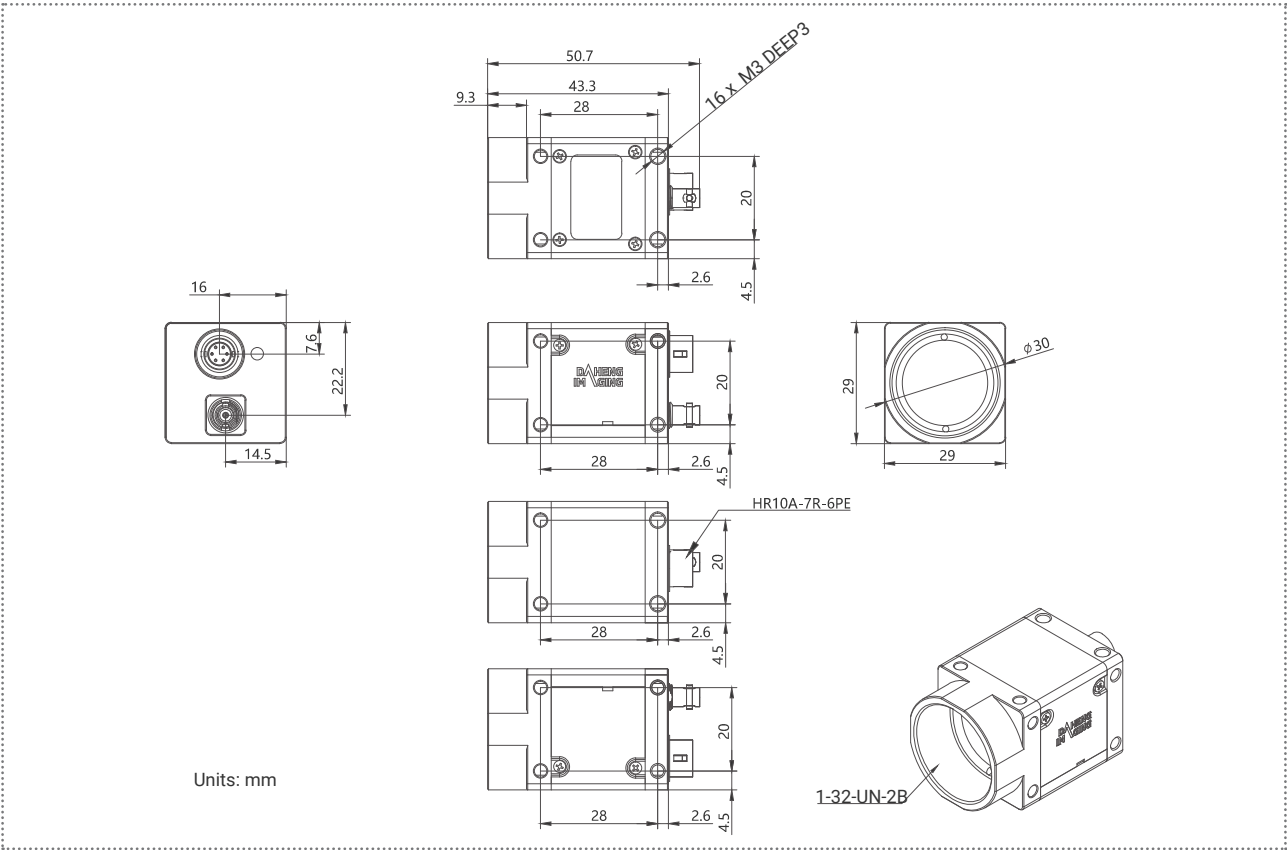
Model	MER3-2020-42X2C	MER3-2020-42X2M
Resolution	4504(H) × 4504(V)	
Sensor	Sony IMX541 Global shutter CMOS	
Sensor Format	1.1"	
Pixel Size	2.74μm × 2.74μm	
Frame Rate	42.74fps	
ADC	8 bit, 10 bit, 12 bit	
Pixel Bit Depth	8 bit, 10 bit, 12 bit	
Mono/Color	Color	Mono
Pixel Formats	Bayer RG8 / Bayer RG10 / Bayer RG12	Mono8 / Mono10 / Mono12
SNR	Bayer RG8: 40.505dB Bayer RG10: 40.588dB Bayer RG12: 40.493dB	Mono8: 40.144dB Mono10: 40.224dB Mono12: 40.162dB
Exposure Time	UltraShort: 1μs ~ 2.4μs, Actual Steps: 0.1μs; Standard: 3μs ~ 1s, Actual Steps: linetime	
Gain	AnalogALL: 0dB~24dB, Default: 0dB, Steps: 0.1dB	
Binning	-	Sensor: 1×1, 2×2
Decimation	Sensor: 1×1, 2×2	
Synchronization	Hardware trigger, software trigger	
Acquisition Mode	Single frame, Continuous, Software trigger, Hardware trigger, CXP trigger	
Reverse X/Y	Reverse X/Y	
I/O Interface	1 input with opto-isolated, 2 programmable GPIOs	
Data Interface	CXP-12 × 1 (HDBNC)	
Power Supply	PoCXP	
Power Consumption	3.582 W @ PoCXP	3.614 W @ PoCXP
Operating Temp.	0°C ~ +45°C	
Storage Temp.	-20°C ~ +70°C	
Operating Humidity	10% ~ 80%	
Cooling	Passive Cooling, optional: Heat Dissipation Fins	
Lens Mount	C	
Dimensions	29mm × 29mm × 34mm (without lens adapter or connectors)	
Weight	60 g	
Software	DAHENG IMAGING or third-party frame grabbers supporting software	
OS	Win7 / Win8 / Win10 / Win11	
Conformity	CE, RoHS, FCC, ICES, UKCA, CoaXPress2.0, GenICam	

I/O Interface



Pin	Definition	Description
1	—	—
2	Line0+	Opto-isolated input +
3	Line2	GPI00 input/output
4	Line3	GPI01 input/output
5	Line0-	Opto-isolated input -
6	GND	PWR GND & GPIO GND

Technical Drawing



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