

# MER2-231-41U3M/C-W90

## MERCURY2 Series 2.3MP CMOS USB3.0 Area Scan Camera



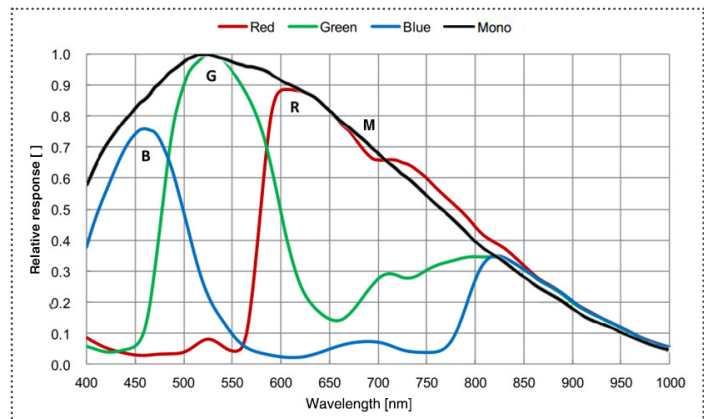
The MER2-231-41U3M/C-W90 camera with 90 degree angle lens mount, compared to MER2-U3 with standard lens mount, MER2-U3 camera with 90 degree lens angle mount has more installation flexibility.

The MER2-231-41U3M/C-W90 camera is a monochrome/color USB3.0 Vision camera with the Sony IMX249 CMOS sensor. The sensor surface is at a 90 degree angle to the Data interface surface. The MER2-231-41U3M/C-W90 has opto-isolated I/Os, and the GPIOs give MER2-U3 cameras maximum flexibility to adapt to specific needs.

### Applications

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

### Spectral Response



### Features

- 90 degree angle lens mount enables the camera to be angle installed in harsh environment
- Trigger mode: Frame Start /Frame Burst Start
- Decimation, Binning, Digital Shift and Black Level
- Adjustable Gamma for optimizing the brightness of images
- Color models support Light Source Preset, Color Transformation Control and Saturation
- Monochrome models support Noise Reduction and Sharpness
- Programmable LUTs and User Set Control
- Support Timer and Counter
- Support Remove Parameter Limit to expand the range of exposure, gain and so on
- 16KB data storage area for saving algorithm coefficients and parameter configuration

## Specifications

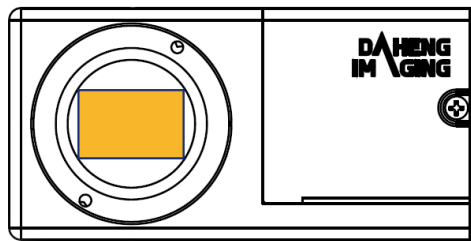
Model	MER2-231-41U3C-W90	MER2-231-41U3M-W90
Resolution	1920(H) × 1200(V)	
Sensor	Sony IMX249 Global shutter CMOS	
Sensor Format	1/1.2"	
Pixel Size	5.86μm × 5.86μm	
Frame Rate	41 fps	
ADC	12 bit	
Pixel Bit Depth	8 bit, 10 bit, 12 bit	
Mono/Color	Color	Mono
Pixel Formats	Bayer RG8 / Bayer RG10 / Bayer RG12	Mono8 / Mono10 / Mono12
SNR	45.33 dB	45.33 dB
Exposure Time	Standard: 20μs ~ 1s, Actual Steps: 1 row period	
Gain	0dB ~ 24dB; Default: 0dB, Steps: 0.1dB	
Binning	1×1, 1×2, 2×1, 2×2	
Decimation	FPGA: 1×1, 1×2, 2×1, 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, 2 programmable GPIOs	
Data Interface	USB3.0	
Power Supply	Power through USB3.0 interface	
Typical Power	1.70 W @ 5 VDC	
Operating Temp.	0°C ~ +45°C	
Storage Temp.	-20°C ~ +70°C	
Operating Humidity	10% ~ 80%	
Lens Mount	C / CS	
Dimensions	29(W) × 29(H) × 58.8(L) mm (with lens adapter, without I/O connectors)	
Weight	78 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®	

I/O Interface



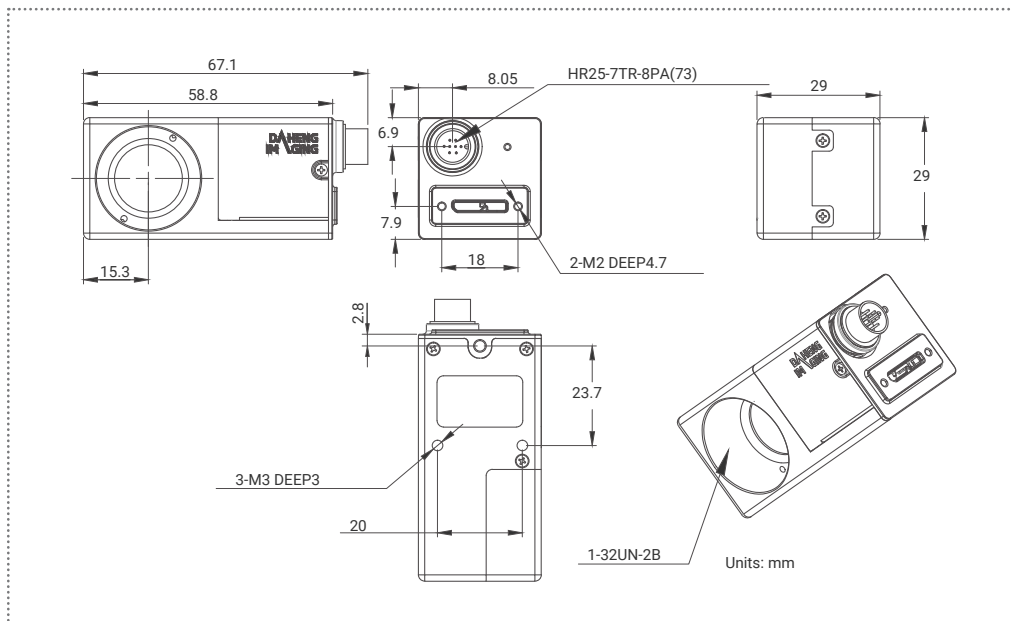
Pin	Definition	Description
1	Line0+	Opto-isolated input +
2	GND	GPIO GND
3	Line0-	Opto-isolated input -
4	NC	NC
5	Line2	GPIO input/output
6	Line3	GPIO input/output
7	Line1-	Opto-isolated output -
8	Line1+	Opto-isolated output +

Sensor Angle Direction



MER2-W90

Technical Drawing



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