ME2P-1231-32U3M/C

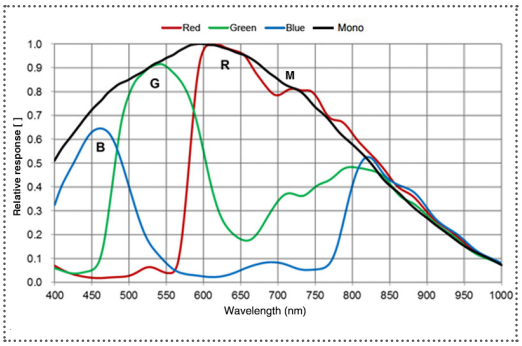
MERCURY2 Plus Series 12.3MP CMOS USB3.0 Area Scan Camera

The ME2P-1231-32U3M/C camera is a monochrome/color USB3.0 Vision camera with the Sony IMX253 CMOS sensor. The ME2P-1231-32U3M/C camera has opto-isolated I/Os that adapt to specific needs. Four-side mounting holes provide maximum installation flexibility for ME2P-U3. Thanks to the extremely compact (36mm × 31mm × 38.8mm), robust metal housings and locking screw connectors, the MERCURY2 Plus 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.

Spectral Response



Features

- Trigger mode: Frame Start /Frame Burst Start
- Support timed exposure mode and triggerWidth exposure mode.
- Two exposure time modes: Standard exposure time mode / UltraShort exposure time 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 Noise Reduction and Sharpness
- Support Sequencer Control and Sensor Bit Depth
- 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

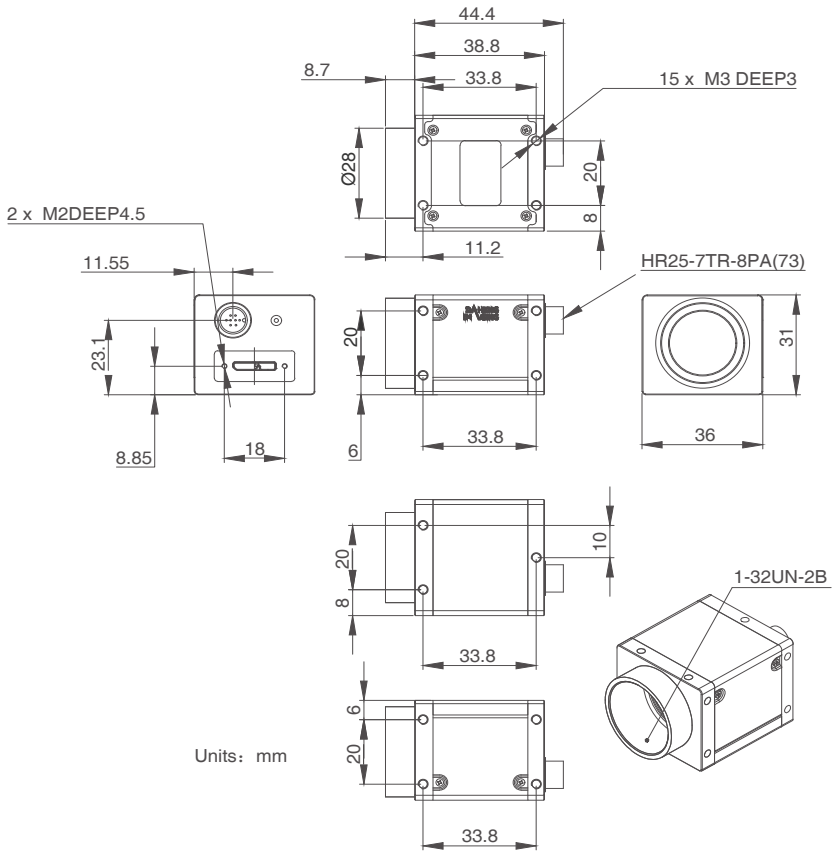
Specifications

Model	ME2P-1231-32U3C	ME2P-1231-32U3M
Resolution	4096(H) × 3000(V)	
Sensor	Sony IMX253 Global shutter CMOS	
Sensor Format	1.1"	
Pixel Size	3.45μm × 3.45μm	
Frame Rate	32.1 fps	
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	40.79 dB	40.63 dB
Exposure Time	UltraShort: 1μs~100μs, Actual Steps: 1μs; Standard: 24μs ~ 1s, Actual Steps: 1 row period	
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 input and 1 output with opto-isolated, 2 programmable GPIOs	
Data Interface	USB3.0	
Power Supply	Power over USB3.0	
Typical Power	3.05 W @ 5 VDC	
Operating Temp.	0°C ~ +45°C	
Storage Temp.	-20°C ~ +70°C	
Operating Humidity	10% ~ 80%	
Lens Mount	C / CS	
Dimensions	36(W) × 31(H) × 38.8(L) mm (without lens adapter or connectors)	
Weight	66 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	Line 0+	Opto-isolated input +
2	GND	GPIO GND
3	Line 0-	Opto-isolated input -
4	NC	NC
5	Line 2	GPIO input/output
6	Line 3	GPIO input/output
7	Line 1-	Opto-isolated output -
8	Line 1+	Opto-isolated output +

Technical Drawing



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

DAHENG IMAGING shall not be liable to damages resulting from errors, inconsistencies or omissions. Specifications are subject to change without prior notice.
Please refer to the manual for more details. Copyright © 2025 China Daheng Group, Inc. Beijing Image Vision Technology Branch. All rights reserved.