

# MERCURY2 FAMILY

## MER2-502-79U3M POL



- 5.0 Megapixels
- 2/3" Global Shutter CMOS sensor
- Ultra small, light and robust
- Polarization camera
- Compatible with GenICam™ and USB3 Vision®
- 2 Programmable GPIOs

The MERCURY2 USB3.0 series (MER2-U3) camera is DAHENG IMAGING's new generation area scan industrial digital camera, featuring outstanding performance, compact design and extremely low noise.

The MER2-502-79U3M POL camera is a polarization camera with the Sony IMX250 CMOS sensor, and capture image of four different light directions simultaneously. Polarization camera can inspect reflective surface such as glass, metal which are difficult for monochrome or color camera. Thanks to the extremely compact, robust metal housings and locking screw connectors, the MERCURY cameras can secure the reliability of cameras deployed in harsh environments.

The MER2-502-79U3M POL camera is powered over the USB interface and has opto-isolated I/Os. The GPIOs give MER2-U3 maximum flexibility to adapt to specific needs. The camera has an outstanding price/performance ratio.

The MERCURY2 family cameras are especially suitable for machine vision applications such as industrial inspection, medical, scientific research, education, security and so on.

### Features

- Programmable ROI, increased frame rate with partial scan
- Gain and exposure programmable
- Support auto gain and auto exposure
- Four acquisition controls: Single frame acquisition / Continuous acquisition / Software trigger acquisition / External trigger acquisition
- Trigger mode: Frame Start /Frame Burst Start
- Support Timed exposure mode and TriggerWidth exposure mode
- Two exposure time modes: standard exposure time mode / minimal exposure time mode
- Support LUTs, storable user sets, Timer and Counter
- Support Decimation, Binning, Reverse X/Y, Digital Shift, Noise Reduction and Black Level
- Adjustable Gamma and Sharpness for optimizing the brightness and sharpness of images
- 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
- Compatible with GenICam™ and USB3 Vision®, support 3rd-party software such as HALCON, MERLIC and LabVIEW
- Optimized software package for 32/64bit Windows, and support Linux, Android, ARMv7 and ARMv8
- Multiple samples and easy-to-integrate SDKs for various programming tools
- Regulations: CE, FCC, GenICam, USB3 Vision

### Performance Specifications

Model	MER2-502-79U3M POL
Interface	USB3.0
Resolution	2448(H) × 2048(V)
Frame rate	79.1 fps @ 2448 × 2048
Sensor	2/3", Sony IMX250 Global shutter CMOS
Pixel size	3.45 μm × 3.45 μm
Pixel Bit Depth	8bit, 10bit
Spectrum	Polarization
Exposure time	20μs ~ 1s
Minimal exposure time	1μs~100μs

### Optical Specifications

Lens mount	C-Mount (standard), CS-Mount (optional)
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### Electrical Specifications

Power requirement	5 VDC via USB cable
I/Os	1 input / 1 output , 2 GPIOs
Data interface	Micro B with locked
Power consumption	<2.7W @5VDC

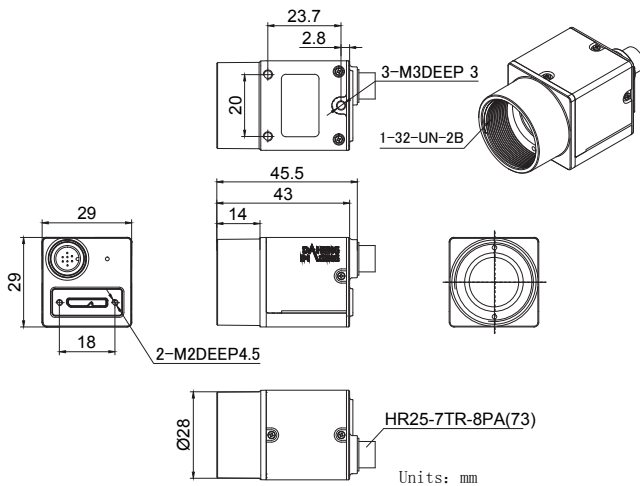
### Environmental Specifications

Operating temp.	0°C ~ +45°C
Storage temp.	-20°C ~ +70°C
Operating humidity	10% ~ 80%

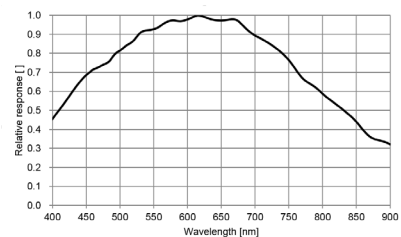
### Mechanical Specifications

Weight	65g
Dimensions	29(W)×29(H)×29(L)mm, w/o connectors

### Technical Drawing



### Spectral Response



MER2-502-79U3M POL

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Specifications are subject to change without prior notice.

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