

# MER3-1610-18G3M/C-P

## MERCURY3 Series 16MP CMOS 2.5GigE Area Scan Camera



The MER3-1610-18G3M/C-P camera is a monochrome/color GigE Vision camera with the Sony CMOS sensor and high performance FPGA. The MER3-1610-18G3M/C-P camera is capable of 2.5Gbit/s maximum transfer data rate, and has opto-isolated I/Os that adapt to specific needs. Four-side mounting holes provide maximum installation flexibility for camera. Thanks to the extremely compact (29mm × 29mm), robust metal housings and locking screw connectors, the MERCURY3 cameras can secure the reliability of cameras deployed in harsh environments.

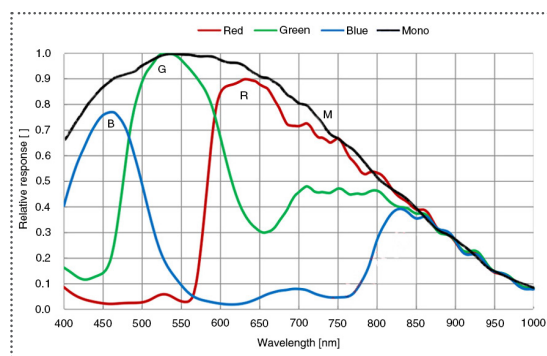
### Applications

Suitable for machine vision applications such as Industrial inspection, rail transport, scientific research, 3D reconstruction and so on.

### Features

- Two trigger types: FrameStart / FrameBurstStart
- Decimation, Gamma, Digital Shift, Black Level and Burst Acquisition
- Timer, Counter, LUTs and User Set Control
- Color models support Light source preset, Color Transformation Control and Saturation
- Mono camera support NoiseReduction and Sharpness
- Support Remove Parameter Limit to expand the range of exposure, gain and so on
- 512K data storage area for saving algorithm coefficients and parameter configuration

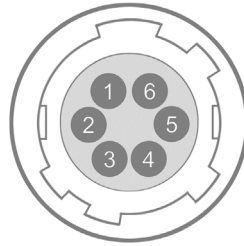
### Spectral Response



## Specifications

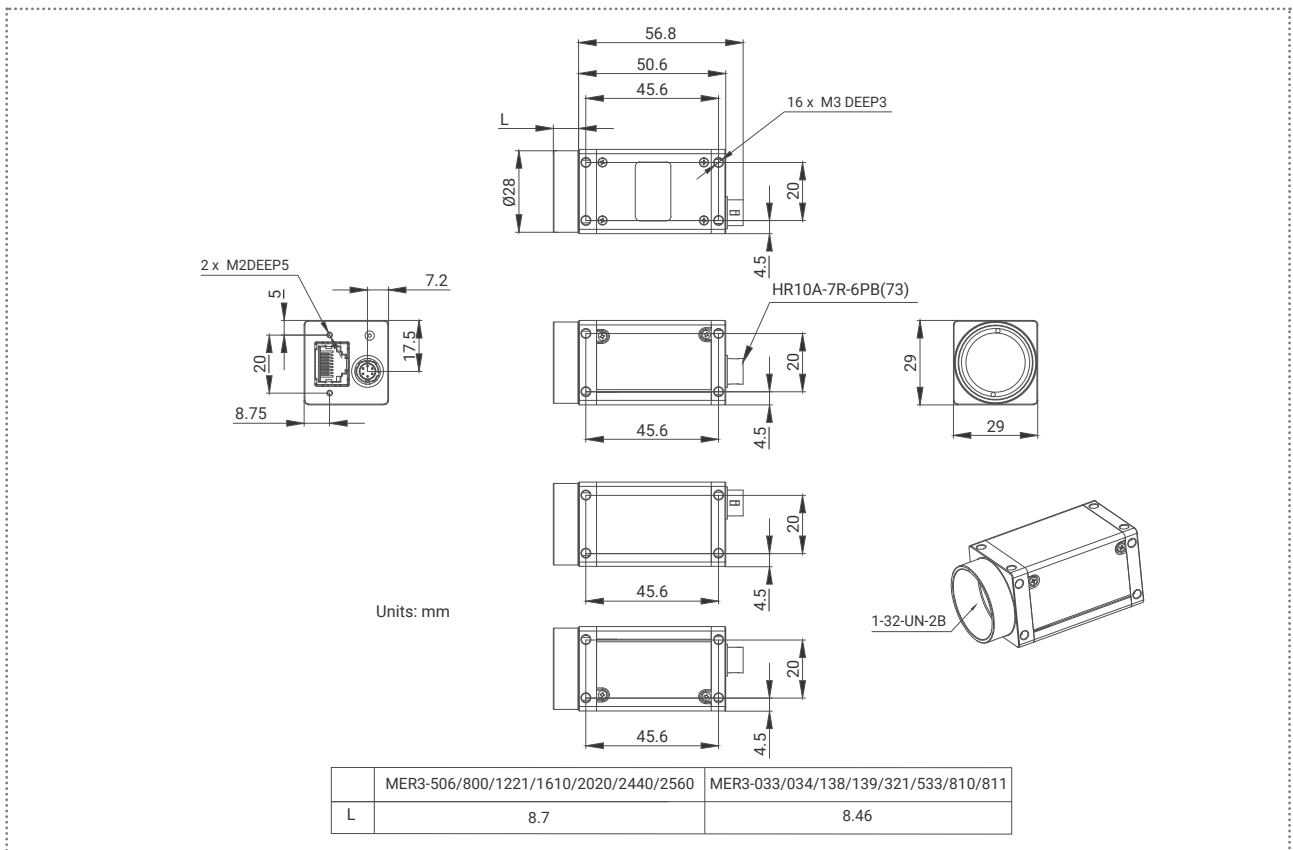
Model	MER3-1610-18G3C-P	MER3-1610-18G3M-P
Resolution	5328(H) × 3040(V)	
Sensor	Sony IMX542 Global shutter CMOS	
Sensor Format	1.1"	
Pixel Size	2.74μm × 2.74μm	
Frame Rate	18fps (Under acquisition burst high speed mode, acquisition frame rate up to 19.87fps)	
ADC	12 bit	
Pixel Bit Depth	8 bit, 12 bit	
Mono/Color	Color	Mono
Pixel Formats	Bayer RG8 / Bayer RG12 / RGB8 / BGR8 / Mono8	Mono8 / Mono12
SNR	40.31 dB	40.07 dB
Exposure Time	UltraShort: 1μs~2.4μs, Actual Steps: 0.1μs Standard: 3μs~20μs, Actual Steps: 1μs; 21μs~1s, Actual Steps: 1 row period	
Gain	0dB ~ 16dB, 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	
Reverse X/Y	Reverse X/Y	
I/O Interface	1 input with opto-isolated, 2 programmable GPIOs	
Data Interface	2.5GigE	
Power Supply	PoE (Power over Ethernet, IEEE802.3af compliant) or 12VDC-10% ~ 24VDC+10%	
Typical Power	5.4W @ 12V / PoE	
Operating Temp.	0°C ~ +50°C	
Storage Temp.	-20°C ~ +70°C	
Operating Humidity	10% ~ 80%	
Lens Mount	C	
Dimensions	29(W) × 29(H) × 50.6(L) mm (without lens adapter or connectors)	
Weight	69 g	
Software	3rd-party software such as HALCON, VisionPro and LabVIEW	
OS	32bit / 64bit Windows, Linux, Mac OS	
Conformity	CE, RoHS, FCC, ICES, UKCA, GigE Vision®, GenICam®	

I/O Interface



Pin	Definition	Description
1	POWER_IN	Camera external power, +12V DC~+24V DC
2	Line0+	Opto-isolated input +
3	Line2	GPIO0 input/output
4	Line3	GPIO1 input/output
5	Line0-	Opto-isolated input -
6	GND	PWR GND & GPIO GND

Technical Drawing



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