

MER3-1220-24G3M/C-P

MERCURY3 Series 12MP CMOS 2.5GigE Area Scan Camera



The MER3-1220-24G3M/C-P camera is a monochrome/color GigE Vision camera with the Sony IMX226 rolling shutter CMOS sensor and high performance FPGA. The MER3-1220-24G3M/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.

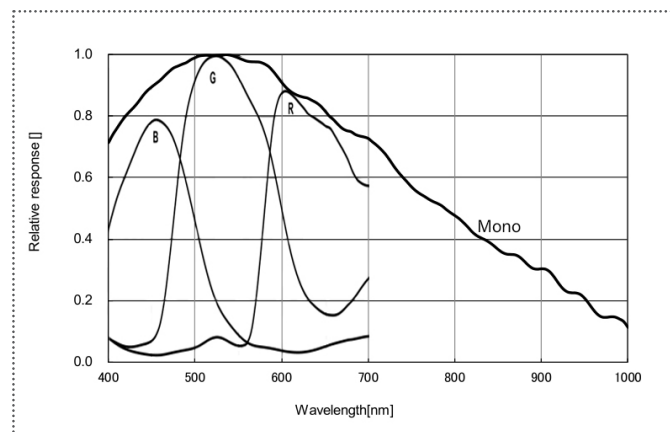
Applications

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

Features

- Two trigger types: FrameStart / FrameBurstStart
- Decimation, Gamma, Digital Shift, Black Level and Burst Acquisition
- Mono camera support NoiseReduction
- Color models support Light source preset, Color Transformation Control and Saturation
- Timer, Counter, LUTs and User Set Control
- 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	MER3-1220-24G3C-P	MER3-1220-24G3M-P
Resolution	4024(H) × 3036(V)	
Sensor	Sony IMX226 Rolling shutter CMOS	
Sensor Format	1/1.7"	
Pixel Size	1.85μm × 1.85μm	
Frame Rate	23.0fps @ 4024 × 3036 Adjust the packet length to 8164 and reserve bandwidth to 5, the frame rate is 24.05fps	
ADC	12 bit	
Pixel Bit Depth	8 bit, 12 bit	
Mono/Color	Color	Mono
Pixel Formats	Bayer RG8 / Bayer RG12	Mono8 / Mono12
SNR	40.48 dB	40.50 dB
Exposure Time	Standard: 11μs~1s, GRR: 11μs~1s, Actual Steps: 1 row period	
Gain	0dB ~ 24dB, Default: 0dB, Steps: 0.1dB	
Binning	1×1, 1×2, 1×4, 2×1, 4×1, 2×2, 4×4	
Decimation	FPGA: 1×1, 1×2, 1×4, 2×1, 4×1, 2×2, 4×4	
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%	
Power Consumption	< 5W @ 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	65 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®	

A diagram of a circular connector with six pins. The pins are numbered 1 through 6 in a clockwise direction starting from the top-left position. The connector has a central circular area with six pins arranged in a circle. The pins are numbered 1, 2, 3, 4, 5, and 6. The connector has a circular outer shell with a flange and a central circular area with six pins.

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 of the MER3 series pressure transmitter, showing dimensions in mm.

Key dimensions and features:

- Top view: 56.8 mm width, 20 mm height, 16xM3 DEEP3 thread.
- Front view: 45.60 mm width, 20 mm height, 1-32-UN-2B thread.
- Side view: 45.60 mm width, 20 mm height, 2x M2 DEEP5 thread.
- Isometric view: Overall shape of the transmitter.

Model	Width (mm)	Height (mm)	Depth (mm)
MER3-501	8.65	8.55	8.75
MER3-1220	8.65	8.55	8.75
MER3-2000	8.65	8.55	8.75

E-mail: isales@daheng-imaging.com