

MER3-138-136G3M-P-SWIR

MERCURY3 Series 1.3MP CMOS 2.5GigE Area Scan Camera



The MER3-138-136G3M-P-SWIR camera is a SWIR GigE Vision camera with Sony IMX990 global shutter CMOS sensor and high performance FPGA. The MER3-138-136G3M-P-SWIR 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 wafer inspection, AOI inspection, spots inspection, medical inspection and so on.

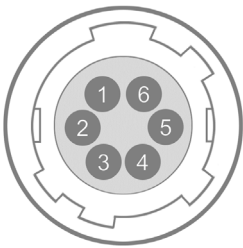
Features

- The Sequencer Control supports multiple sets of parameters configuration
- Decimation, Gamma, Digital Shift and Black Level
- Burst Acquisition
- Timed exposure mode and TriggerWidth exposure mode
- Two exposure modes: Standard / UltraShort
- Timer, Counter, LUTs and User Set Control

Specifications

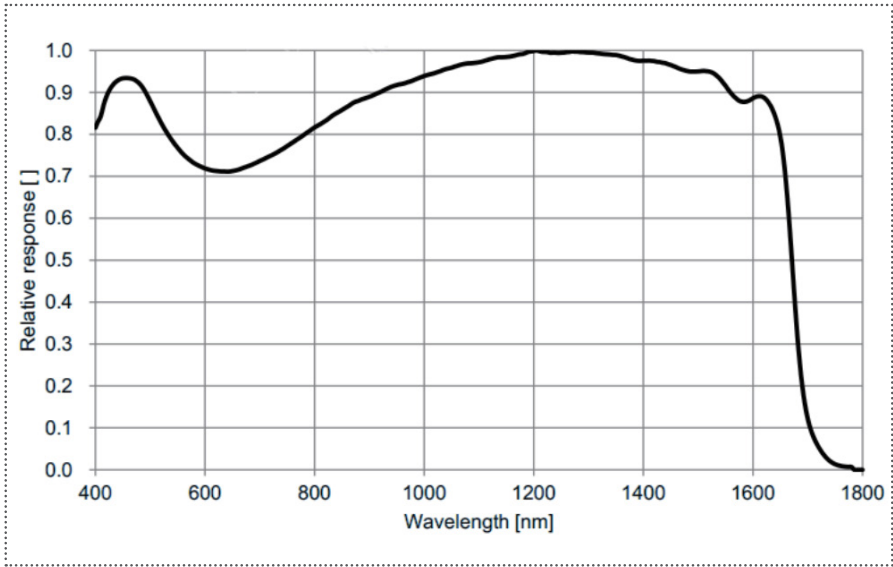
Model	MER3-138-136G3M-P-SWIR
Resolution	1280(H) × 1024(V)
Sensor	Sony IMX990 Global shutter CMOS
Sensor Format	1/2"
Pixel Size	5μm × 5μm
Frame Rate	72.4 fps (Under acquisition burst high speed mode, sensor bit depth BPP8, acquisition frame rate up to 135.54fps)
ADC	8 bit, 10bit, 12 bit
Pixel Bit Depth	8 bit, 10bit, 12 bit
Mono/Color	Mono, SWIR
Pixel Formats	Mono8 / Mono10 / Mono12
SNR	50.76 dB
Exposure Time	UltraShort: 3μs~100μs, Actual Steps: 1μs Standard: 13μs~1s, Actual Steps: 1 row period
Gain	0dB ~ 24dB, Default: 0dB, Steps: 0.1dB
Binning	1×1, 1×2, 2×1, 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%
Power Consumption	< 5 W @ 12V / PoE
Operating Temp.	0°C ~ +50°C
Storage Temp.	-20°C ~ +70°C
Operating Humidity	10% ~ 80%
Cooling	Passive Cooling, optional: Heat Dissipation Fins
Lens Mount	C
Filters / Transparent Glass	-
Dimensions	29(W) × 29(H) × 50.6(L) mm (without lens adapter, connectors or Heat Dissipation Fins) 85.2(W) × 29(H) × 50.6(L) mm (without lens adapter or connectors, with Heat Dissipation Fins)
Weight	68 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

Spectral Response



Technical drawing of the MER3-033-034/138/139/321/533/810/811 device, showing dimensions in mm.

Top view dimensions: 56.8 (total width), 50.6 (inner width), 45.6 (mounting hole spacing), 20 (height), 16 x M3 DEEP3 (mounting holes).

Side view dimensions: 45.6 (depth), 20 (height), 4.5 (flange thickness).

Front view dimensions: 45.6 (width), 20 (height), 4.5 (flange thickness).

Perspective view shows the device with a 1-32-UN-2B thread on the front.

Detail view shows 2 x M2DEEP5 mounting holes and 16 x M3 DEEP3 mounting holes. Dimensions: 20 (hole spacing), 17.5 (hole diameter), 8.75 (hole offset), 7.2 (hole diameter).

Units: mm

	MER3-506/800/1221/2440/2560	MER3-033/034/138/139/321/533/810/811
L	8.7	8.46

Units: mm

Specifications	MER3-033/034/138/139/321/533
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