Fiber Optic 10GigE Line Scan Camera

MV-L081M20-10GF-V2

- High bandwidth, long transmission distance
- Large Pixel Size, High Dynamic Range
- Low power consumption design, less thermal noise

Fiber Optic 10GigE Line Scan Camera

Key Features

- High line frequency 200KHz, help more high-speed applications.
- Breaking the 10Gbps bandwidth limit of fiber, once again x1.6+ times faster (16Gbps@1link).
- Low power consumption, no heat dissipation, stable operation is not hot.
- Supporting acquisition card: XGG242, acquisition card with 4 optical fiber interface (connected to 4 cameras).
- The acquisition card adopts FPGA scheme to solve the problem of packet loss and release the CPU resources of PC.
- 7μm large pixel, 63.3dB high dynamic range, better image effect.
- Rich ISP functions: support FPN correction, light/dark field correction, light source correction, image noise reduction, etc.
- Built-in 8G large capacity frame buffer, safe and reliable verification and repair technology to ensure reliable transmission.
- Compatible with OpenCV, LabView, Halcon, etc.
- Application scope: lithium, panel, film and other fields, suitable for production line detection speed, high sensitivity performance requirements of coil applications.
- Dimension: 78mm×78mm×58mm

Specifications

Model / Parameters	MV-L081M20-10GF-V2 8K Mono Line Scan Industrial Camera
Performance Parameters	
Sensor Type	CMOS,Global Shutter
Pixel Size	7.0μm×7.0μm
Resolution	8192×1
Sensor Optical Size	57.34mm
Mono/Color	Mono
Imaging Mode	1line
Maximum Line Rate	Continuous mode: 200KHz (1line)
Dynamic Range	63.3dB
Gain	1x-9x
Exposure Time	5us-40ms, 1us adjustable step
Exposure Mode	Support manual exposure/single exposure/automatic exposure/ pulse width control exposure
Output Image Format	Mono8/Mono8u/Mono12Packed
Pixel Merge	2x2, 4x4

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Mirror Image	Support horizontal mirroring
Trigger signal source	Internal trigger, external trigger
External Trigger Mode	Line trigger, frame trigger, line+frame trigger
Line Rate Control	Camera internal frequency doubling/frequency division (external trigger), software setting (internal trigger)
Image Buffer	8Gbit
ISP Function	FPN correction/light and dark field correction/look-up table / Gamma/ multiple lens distortion correction/light source correction/ contrast/black level
Electrical Characteristics	
Data Interface	10G optical port (using SPF+)
I/O Interface	1 frame signal input (opto-coupler isolated), 2 line signal inputs (AB phase), 4 outputs (not opto-coupler isolated)
Power supply	DC 12V-24V (±10%)
Typical Power Consumption	8W@DC24V(Typical value of maximum continuous line frequency)
Structure and environmental parameters	
Lens Interface	M72*0.75, flange back focus 12mm, can be adapted to F-port, C-port and other threaded lenses by adapter ring
IO and Power Interface	12 pole industrial circular connector
Filter	Full Band Transparency Enhancer
Overall Dimension	78mm x 78mm x 58mm (without lens connector)
Weight	Approx. 550g
IP Protection Rating	IP30 (with lens and cable properly installed)
Temperature	Operating Temperature: -10℃ ~ 45℃, Storage Temperature: -20℃~ 70
Humidity	5% ~ 90%RH (non-condensing)
Software and Protocols	
Software	SDK development kit, and associated demo/calibration software BasedCam2
Operating Systems	Windows 7/10 64bits, PC Linux 64bits, ARM Linux
Protocols/Standards	Self-developed protocol, GenICam
Compatible Software	LabView, Halcon
Certifications	CE, RoHS

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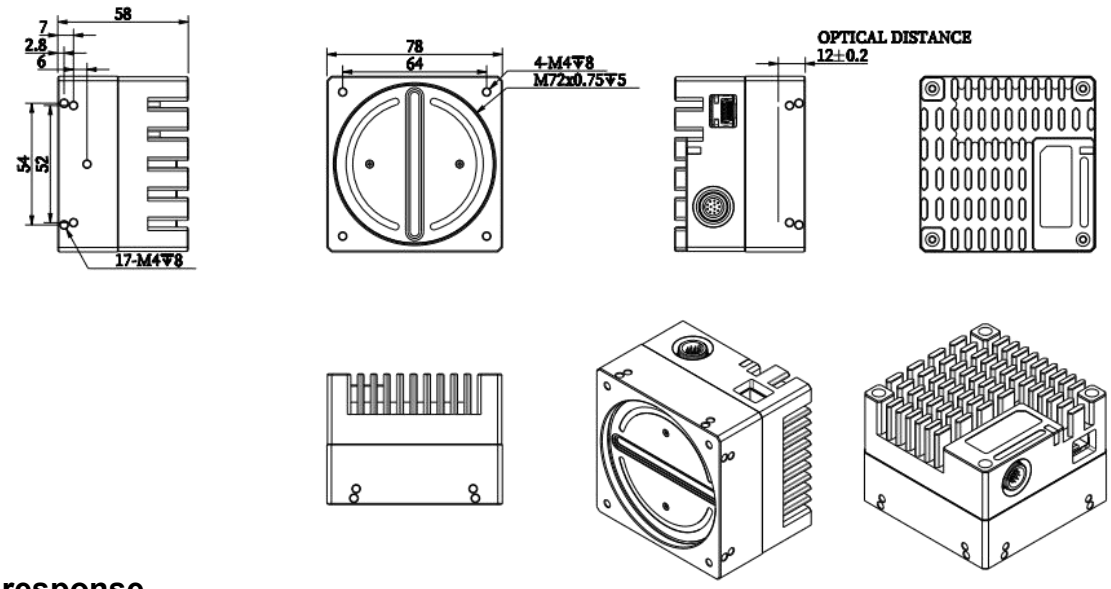
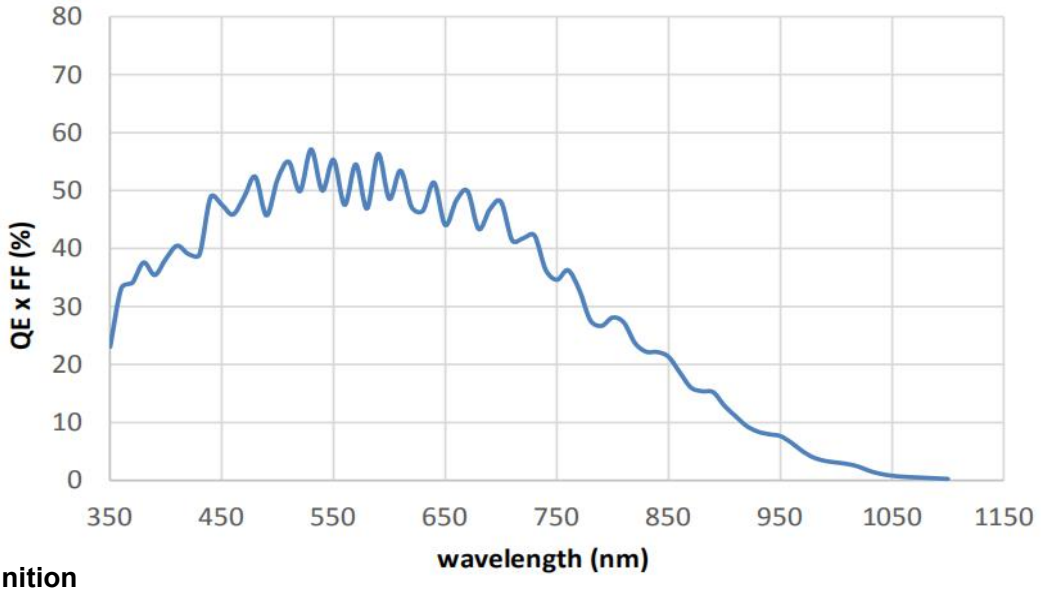
Overall dimensions



spectral response



Interface definition

Pin	Color	Definition	Signal Source	Description	Isolated/non-isolated	Interface Circuit	Input/Output Parameters
1	Blue	GND	Line (6~9)-	Power/Signal Ground			
2	Brown	POWER		Power input positive			12-24V power input
3	Red	IN1+	Line 1+	Encoder A phase input positive	Non-isolated inputs	Comparator	Supports 3.3V-24V differential signals Support 12-24V voltage signal Support 12-24V PNP signal Supports NPN input
4	Red and White	IN1-	Line 1-	Encoder phase A input negative			
5	Black	IN2+	Line 2+	Encoder phase B input positive			
6	Mono	IN2-	Line 2-	Encoder phase B input negative			
7	Yellow	TRIG	Line 3	Trigger signal input	Isolated Input	Optocoupler	Low effective: 0-1V
8	Green	TRIG	Line 3	Trigger signal input			

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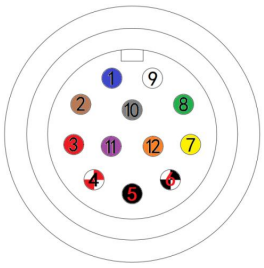
							High effective: 5-24V No port polarity
9	White	FLASH_OUT1+	Line 6+	Timed exposure output 1	Non-isolated output	push-pull circuit	Output high level: 12V Output low level: 0.3V
10	Gray	FLASH_OUT2+	Line 7+	Timed exposure output 2			
11	Purple	FLASH_OUT3+	Line 8+	Time-shift exposure output 3			
12	Orange	FLASH_OUT4+	Line 9+	Timing exposure output 4			
	Transparent	shielded wire		Shielded cable to camera housing			Remarks: transparent heat-shrinkable tubing for shielded wires
Trigger Block							



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