

10 Gigabit Network Array Industrial Camera-General Series

With the widely application of machine vision in industries, high-speed and high-precision visual inspection has a higher requirements on the resolution and frame rate of industrial cameras. In order to meet the market demand, MindVision launched 10GigE 8K line scan industrial camera to adapt to various line scan cameras scenario application requirements. It is widely used in printing, textile, railway, logistics, metallurgy, food, pharmaceutical, material sorting, etc.

Product Features

- Support flat-field correction function
- With multi-exposure automatic switching function
- Gain and Offset programmable settings are supported
- The interface is matched with the capture card, which greatly reduces the cost
- The cost of the interface with the capture card is greatly reduced
- Adopting standard 10 Gigabit network interface design, and stable communication can be realized by super six network cables, Compared with the CameraLink interface with a capture card, the cost is greatly reduced
- Support encoder synchronous trigger, photoelectric sensor and encoder combination multiple trigger modes
- The farthest transmission distance can reach 100 meters, and the industrial field wiring is no longer restricted and backward compatible with Gigabit Ethernet
- The effective bandwidth is 1200MByte, which is 10 times that of dry meganet, which greatly reduces the image transmission time and delay
- Support GigEVision. GenICam standard and the same SDK as Gigabit camera, shorten customer development cycle



Product Selection Table

Model Number	Resolution	Sensor type	Shutter method	Pixel size	Line frequency	Target size	Minimum exposure	Sensor model	Colour
MV-XGL81M	8240X1	CMOS	Global	7.04μm	70Kx1	58mm	0.003ms	Mindvision	Mono
MV-XGL83M	8192X1	CMOS	Global	7.0μm	105kHz	57mm	0.003ms	Mindvision	Mono
MV-XGL83C	8192X3(RGB)	CMOS	Global	7.0μm	50kHz	57mm	0.003ms	Mindvision	Mono
MV-XGL163M	16384X1	CMOS	Global	3.5μm	72kHz	57mm	0.003ms	Mindvision	Mono
MV-XGL163C	16384X2(Bayer)	CMOS	Global	3.5μm	72kHz	57mm	0.003ms	Mindvision	Mono

Technical Parameter

Parameter	Model MV-XGL83M/C	MV-XGL163M/C
Color specification	Mono/color	Mono/color
Data format	Mono/RGB	Mono/Bayer
Line frequency	Mono: 105k(8bit)/70k(12bit); Color: 50k	72kHz
Resolution ratio	8192x1/8192x3	16384x1/16384x2
Sensor size	57mm (photosensitive area)	57mm (photosensitive area)
Lens interface	M72, flange distance 12mm	M72, flange distance 12mm
Exterior dimensions	80x80x69.29mm (excluding lens holder and rear shell interface)	80x80x69.29mm (excluding lens holder and rear shell interface)
AD width	10bit/12bit (refers to the width supported by sensor)	10bit/12bit (refers to the width supported by sensor)
Pixel size	7um X 7um	3.5umX3.5um
Data bit width	8/12bits (width of data output by camera to user)	
Dynamic range	65db	
Transmission mode	GigE Vision v1.2, Genlcam	
Transmission interface	10 Gigabit network port (10 gigabit copper cable 10GBase-T, compatible with 100M/1G/25/5G)	
Power consumption	15W	
Working temperature	0-50C	
Working humidity	20-80% (without condensation)	
Storage temperature	-30-60°C	
Storage humidity	20-95% (without condensation)	
Power supply	12V±10%	
Weight	< 1000g	

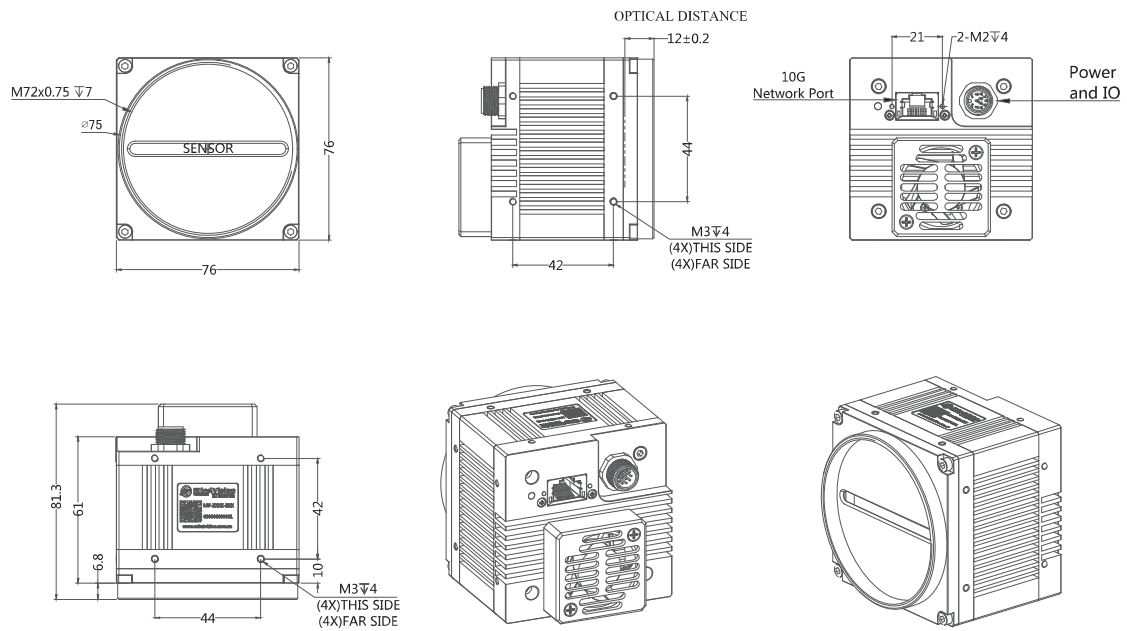
Technical Parameter

Specifications	Parameter	Specifications	Parameter
Model	MV-XGL81M	Frame buffer	256M Bytes
Resolution@ frame rate	8240X1@70KX1	User defined data area	2K Bytes
Pixel size	7.04μmX7.04μm	Video output format	Mono : Mono8/Mono12
Pixel bit depth	12bit	Lens Mount	M72 (Flange distance 12mm)
Sensitivity	Mono : 210DN/nJ/cm2@12-bit, peak	Power supply	External 12V power supply
Acquisition mode	Continuous/soft trigger/hard trigger	Power	< 15W
Maximum gain (multiple)	8	Overall dimension	76X76X61mm (External 12V power supply)
Exposure time range (ms)	0.003~10	Weight	< 700g

General parameters

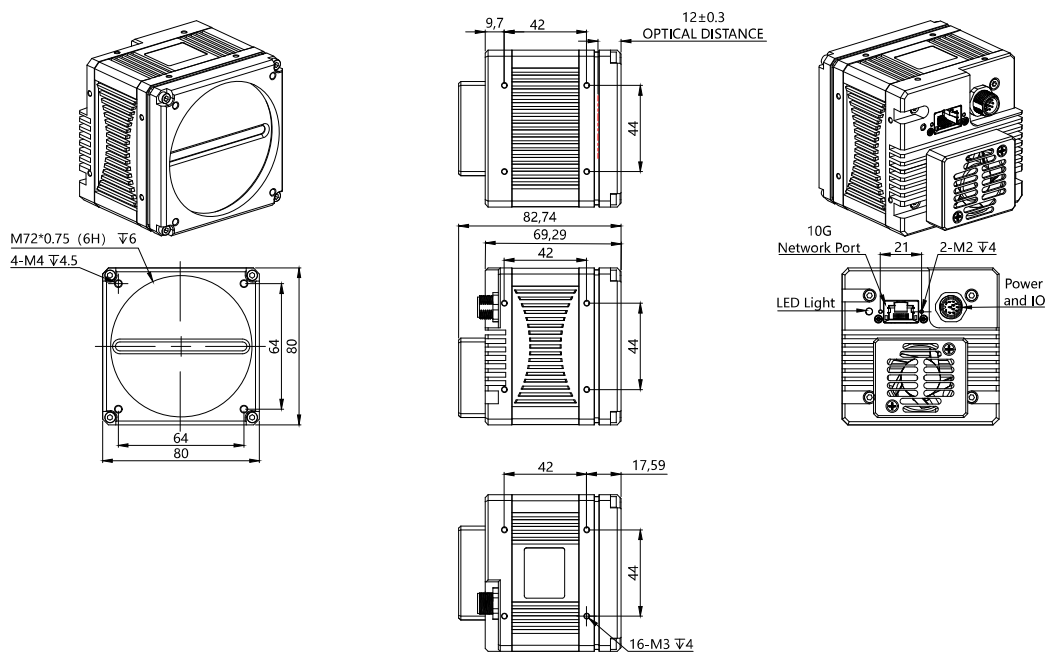
Programming language pack	C/C++/C#/VB6/VB.NET/Delphi/BCB/Python/Java
Operating system	WIINXP, WIN7/8/10 32@64 bit system, Linux and ARM Linux driver, Android platform driver, MAC OS system
Driver	Directshow component Halcon special component Labview special driver OCX component TWAIN component
Data interface	10G copper cable 10GBase-T, compatible with 100M/1G/2.5G/5G
Vision Standard Agreement	GigE Vision V1.2、GenIcam
Filter	Black and white cameras come standard with double-sided AR antireflection film, and color cameras come standard with 650nm infrared cut filter
Working temperature @humidity	0~50°C @ 20%~80%(No condensation)
Storage temperature @humidity	-30~60°C @ 20%~95%(No condensation)
Other functions	Support any size ROI custom resolution, contrast and gamma adjustment, saturation adjustment, white balance correction, black level correction, custom dead point coordinate correction,ISP image processing acceleration, 3D noise reduction, custom LUT table, frame rate adjustment, custom camera name, etc.

XGL81 Dimension Drawing



Unit mm

XGL83&XGL163 Dimension Drawing



Unit mm

10 Gigabit Network Array Industrial Camera -256 TDI Series

At the end of 2021, Medvision was the first in China to launch a 256-class TDI 10-gigabit network array industrial camera, which made up for the domestic gap. This series adopts domestic linear array chips. At present, there are altogether three specifications in this series: MV-XGL42M-T2/MV-XGL82M-T2/MV-XGL162M-T2. The line pixels are 4096/8192/16384 respectively, and the highest line frequency can reach 250K/144K/72K, meeting the requirements of customers for high speed and stability.



MV-XGL42M



MV-XGL82M



MV-XGL162M

Product Features

- 5um pixel, 10 Gigabit network interface
- 26-grade TDI, reducing the demand of light source
- Sensor line frequency up to 250k/200k(sensor output pixel width 10bits/12bits)
- Support 256-line area array focusing mode
- Gain and Offset programmable settings are supported, and flat-field correction is supported.
- Support encoder synchronous trigger, photoelectric sensor and encoder combination multiple trigger modes

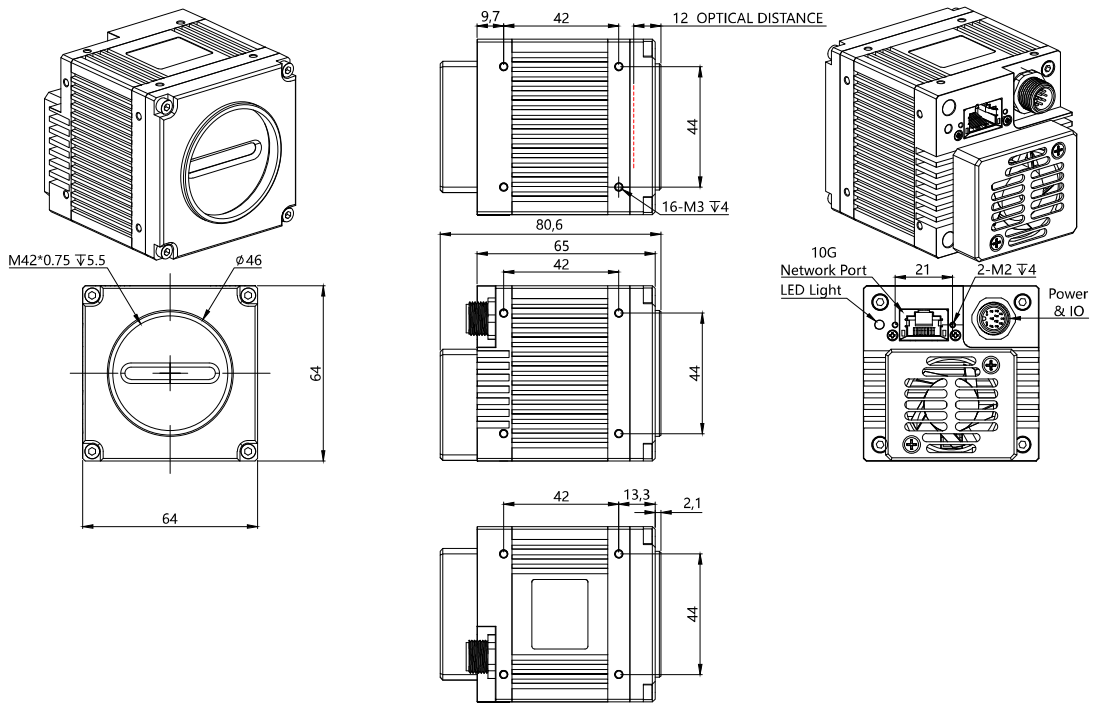
Product Selection Table

Model Number	Resolution	Sensor type	Shutter method	Pixel size	Line frequency	Target size	Minimal exposure	Sensor model	Colour
MV-XGL42M	4096X256	CMOS	Global	5.0μm	250/200KHz	21.177mm	0.003ms	Mindvision	Mono
MV-XGL82M	8192X256	CMOS	Global	5.0μm	144/96KHz	41.637mm	0.003ms	Mindvision	Mono
MV-XGL162M	16384X256	CMOS	Global	5.0μm	72/48KHz	82.666mm	0.003ms	Mindvision	Mono

Technical Parameter

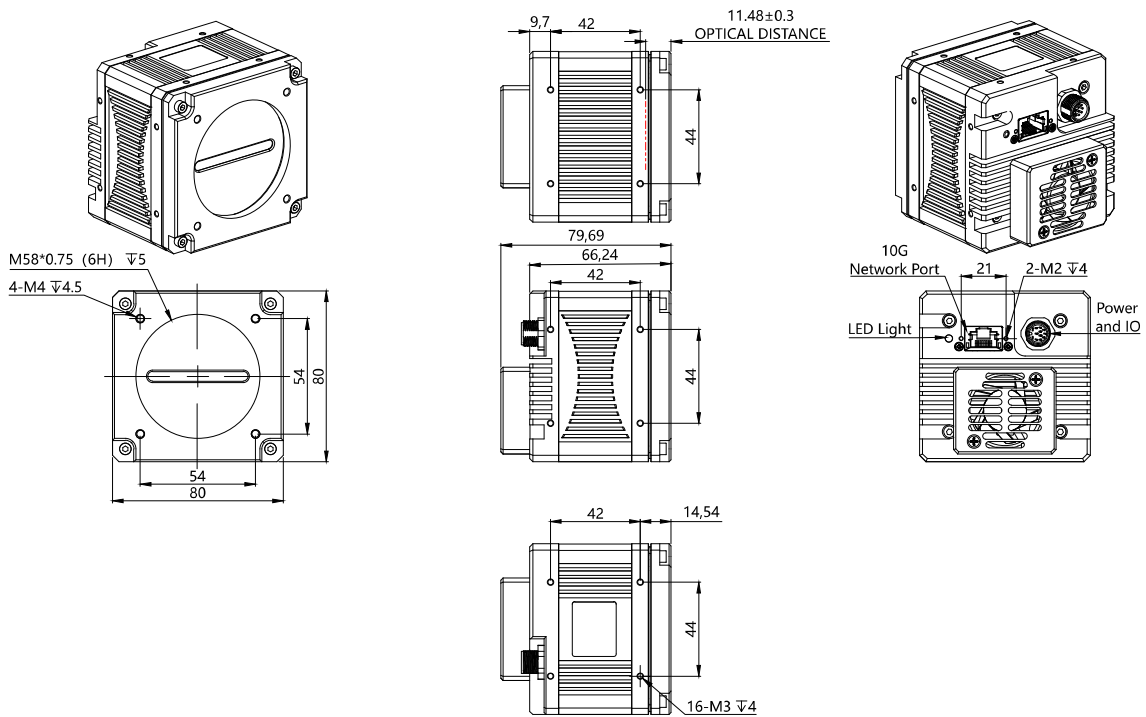
Model Parameter	MV-XGL42M	MV-XGL82M	MV-XGL162M
Resolution	4096x256	8192x256	16384x256
Sensor size	21.177mm (photosensitive area)	41.637 mm (photosensitive area)	82.666mm (photosensitive area)
Lens interface	M42, flange distance 12mm	M58, flange distance 12mm	M90, flange distance 12mm
Exterior dimensions	64X64X65mm (excluding lens holder and rear shell interface)	80x80x66.24mm (excluding lens holder and rear shell interface)	110x110x66.81mm (excluding lens holder and rear shell interface)
weight	<700g	<1000g	<1500g
Camera line frequency	250k(8bit)/200k(12bit)	144k(8bit)/96k(12bit)	72k(8bit)/48k(12bit)
Sensor line frequency	20 k/200 k (sensor output pixel width 10bits/12bits)		
Ad width	10bit/12bit (refers to the width supported by sensor)		
Pixel size	5um X5um		
Data bit width	8/12bits (camera output data width to user)		
Data format	Mono		
Color specification	Mono		
TDI	Class 256		
Dynamic range	High sensitivity mode: 67db and low sensitivity mode: 65db		
Sensitivity	340DN/nJ/cm2		
Transmission mode	GigE Vision v1.2, GenIcam		
Transmission interface	10 gigabit network port (10 gigabit copper cable 10GBase-T, compatible with 100M/1G/2.5/5G)		
Colour	Mono		
Power	<15W		
Working temperature	0-50°C		
Working humidity	20~80% (without condensation)		
Storage temperature	-30-60C		
Storage humidity	20~95% (without condensation)		
Power supply	12V±10%		

XGL42M Dimension Drawing



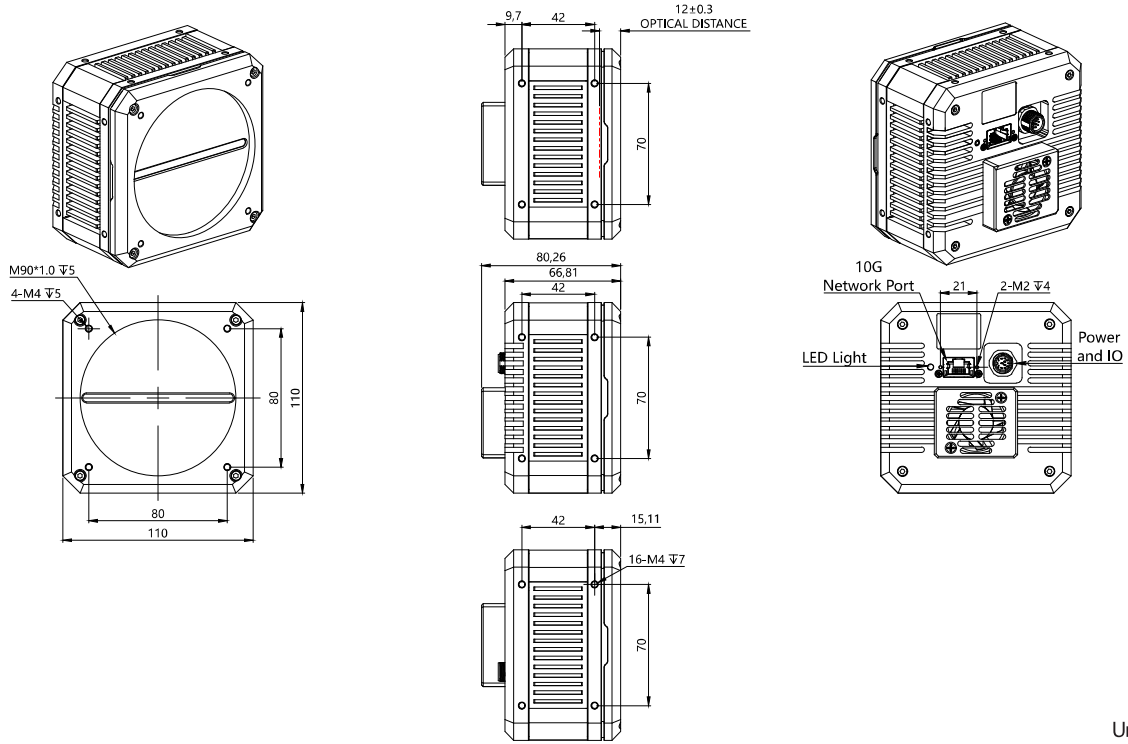
Unit mm

XGL82M Dimension Drawing



Unit mm

XGL162M Dimension Drawing



Unit mm