Jelly5 Series GigE Vision Industrial Digital Cameras

Introduction

Jelly5 series GigE Vision industrial digital cameras adopt the latest GigE Vision technology, the cameras allow distant fast image transfer with low cost. The cameras support hot-plug, flash light, and external trigger. Jelly 5 series digital cameras can be widely used in machine vision and a variety of image acquisition areas.

Features

1. Adopt GigeE Vision interface, the utmost transmission distance can be up to 100 meters with Super 5 types network cable;

2. Mono and color cameras resolution from 0.4MP to 14.0MP;

3. Global shutter series 60fps@1.2MP, 60fps@1.3MP, 50fps@2.0MP;

4. Rolling shutter series 14fps@5.0MP, 6.5fps@14.0MP;

5. Support AOI, exposure adjustment, gain adjustment, GPIO Opto-isolated external trigger interface;

6. GigE Vision protocol, provide completed SDK for users' secondary development, support VC, VB, C# development language and LABVIEW, HALCON, VISIONPRO 3rd party software;

7. Support Windows XP, WIN 7, WIN 8, WIN 10 32&64 bit and Linux 32&64 bit operation systems;

8. CNC processed high precision aluminum alloy housing, size 29×29×37.5mm;

9. Support C-mount interface and customize lens interface;

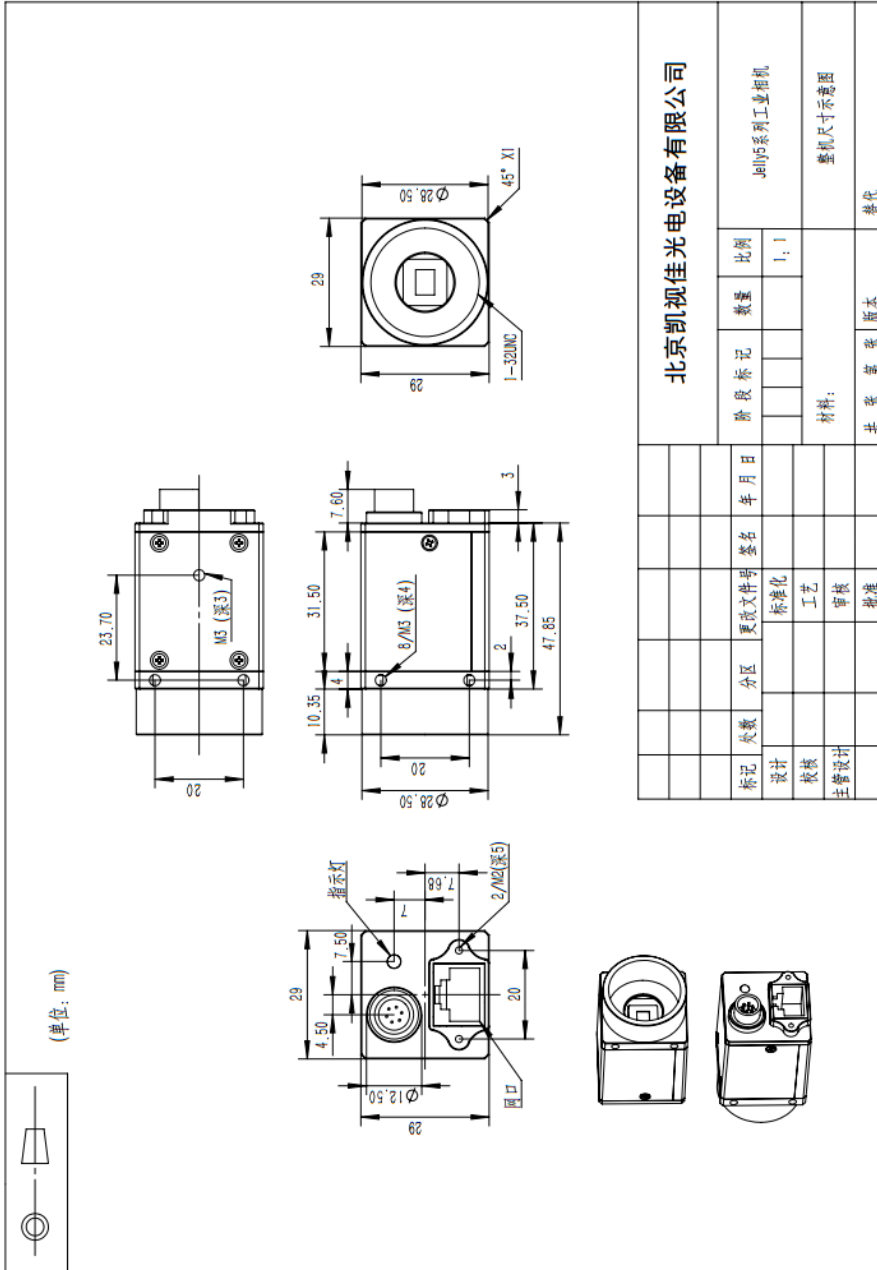10. 12V external power supply, power <3w.

Application

Jelly5 series GigeE Vision industrial cameras are mainly designed for machine vision and various image acquisition areas. They can be used for Gel imaging, License image capture, Medical diagnosis, Microscopy imaging, Notes image capture, Industrial production line image capture, Fingerprint & palmprint image capture, Desktop image, High speed vehicle license plate capture, Outdoor Monitoring, iris capture and etc..
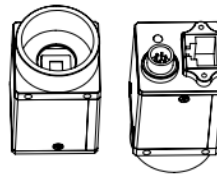
Specification

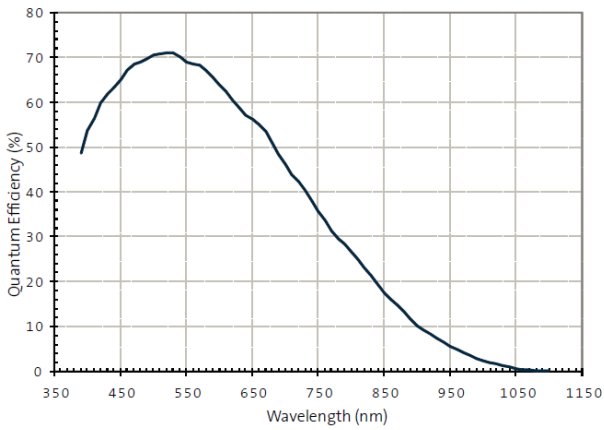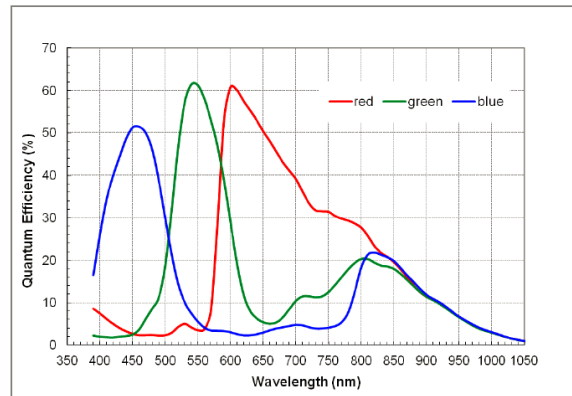| Model	MGS40M/C (SGYYO)	MGC120M/C (MGYYO)	MGE130M/C (EGYYO)	MGE200M/C (EGYYO)	MGI401M/C (IGYYO)	MGC500M/C (MRYYO)	MGS640M/C (SRYYO)	MGC1400M/C (MRYYO)
Sensor Model	Sony IMX287	Aptina AR0134	E2V EV76C560	E2V EV76C570	ISG4006	Aptina MT9P031	Sony IMX178	Aptina MT9F002
Mono/ Color	mono/color	mono/color	mono/color	mono/color	mono/color	mono/color	mono/color	mono/color
Sensor Type	CMOS	CMOS	CMOS	CMOS	CMOS	CMOS	CMOS	CMOS
Scan Mode	Progressive Scan	Progressive Scan	Progressive Scan	Progressive Scan	CMOS	Progressive Scan	Progressive Scan	Progressive Scan
Shutter	Global Shutter	Global Shutter	Global Shutter	Global Shutter	Global Shutter	Rolling Shutter	Rolling Shutter	Rolling Shutter
Effective Pixel	0.4MP	1.2MP	1.3MP	2.0MP	4.0MP	5.0MP	6.4MP	14.0MP
Sensor Size	1/2.9 inch	1/3 inch	1/1.8 inch	1/1.8 inch	1 inch	1/2.5 inch	1/1.8 inch	1/2.3 inch
Pixel Size	6.3μm×6.3μm	3.75μm×3.75μm	5.3μm×5.3μm	4.5μm×4.5μm	5.5μm×5.5μm	2.2μm×2.2μm	2.4μm×2.4μm	1.4×1.4um
Max Resolution	720×540	1280 × 960	1280 × 1024	1600 × 1200	2048 × 2048	2592 × 1944	3096x2080	4608 × 3288
Frame Rate	240fps	60fps	60fps	50fps	20fps	14fps	15fps	14fps
Min. Exposure Time	17μs	17μs	16μs	15μs	6μs	35μs	28μs	36μs
SNR	47dB	38dB	41dB	39dB	65dB	38.1dB	50dB	36.5dB
Dynamic Range	74dB	64dB	62dB	52dB	98dB	70.1dB	70dB	65.3dB
Image Output	GigE interface, Bandwidth 1Gb/s							
Power Supply	External Power Supply, 12V 1A							
Frame Buffer	128MB							
Input / Output	Opto-isolated GPIO, 1 of external trigger input, 1 of flashlight output, 1 of 12V power input							
Main Function	Image preview, image capture, video capture							
Programmable Control	Capture field of view AOI, SKIP/Binning mode, RGB Gain, Exposure, Fixed frame rate, External trigger capture							
White Balance	Auto / Manual							
Exposure	Auto / Manual							
Image Format	Support 8bit, 24bit, 32bit Image Preview and Capture, Save as "Jepg", "Bmp", "Tiff" format (mono cameras support 8bit bitmap)							
Supported Standard	GigE Vision							
Operation System	Support Windows XP/7/8/10 32&64 bit, Linux 32&64 bit Operation System							
SDK	Support VC, C#, VB, DELPHI developing Language, LABVIEW, OPENCV, HALCON, MIL software							
Lens Interface	Standard C-mount (CS-mount and M12 mount is optional)							
Working Temperature	0℃~60℃							
Storage Temperature	-30℃~70℃							
Camera Dimension	29mm(height)×29mm(width)×37.5mm(length)							
Camera Weight	54g							
Warranty	3 Years							
Accessories	Color cameras come with IR cut filter(mono camera does not have filter), 3m GigE cable(5m is optional) with fixing screws, 6-pin Hirose GPIO connector, external trigger cable(2 pins for power supply), 1 CD with software and SDK.							

Dimension

北京凯视佳光电设备有限公司

Jelly5系列工业相机

整机尺寸示意图

(单位：mm)

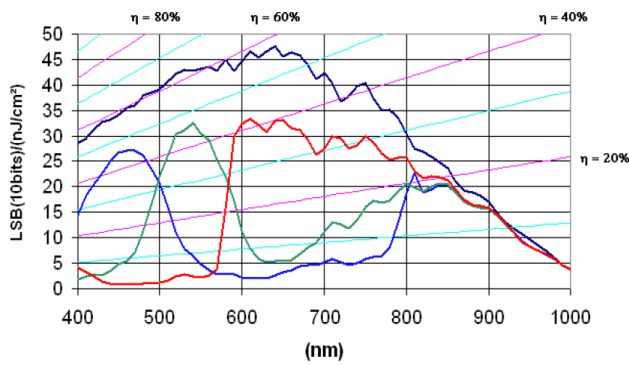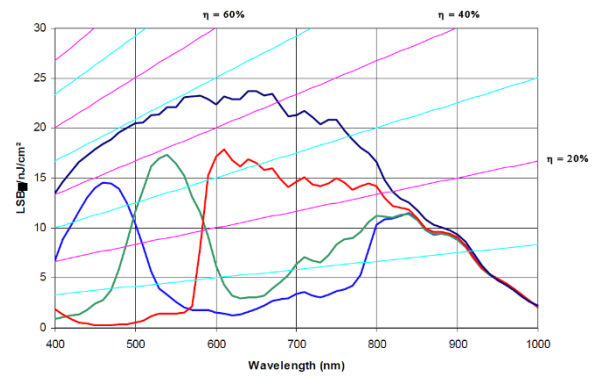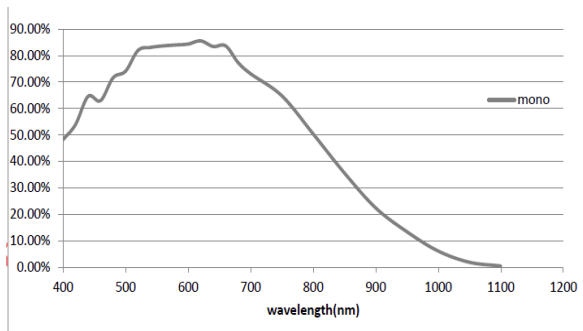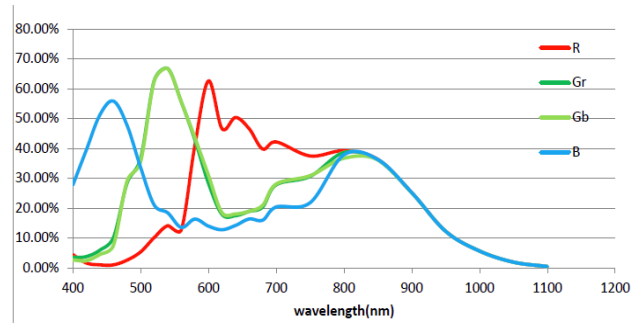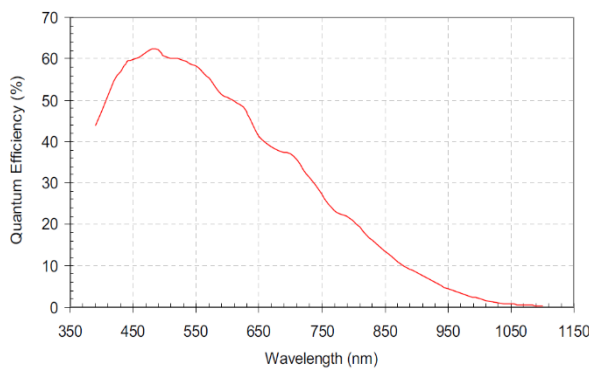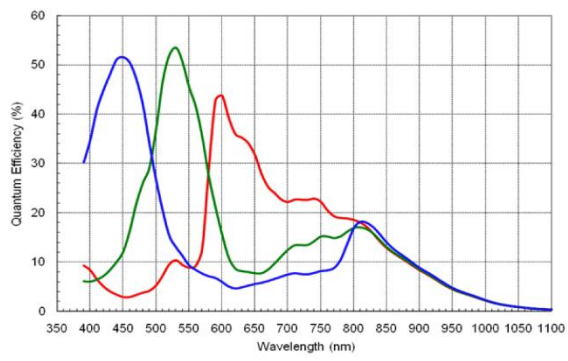## Spectral Response Curve

MGC120M
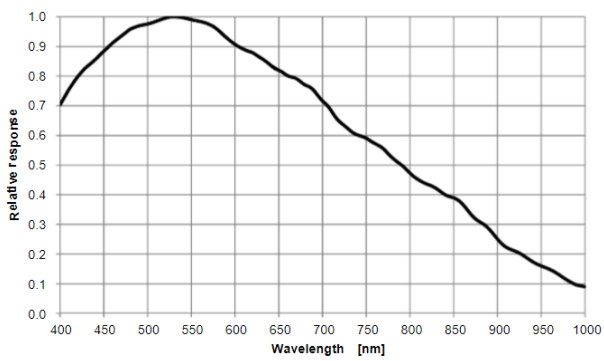

MGC120C

MGE130M/C

MGE200M/C

MGI401M

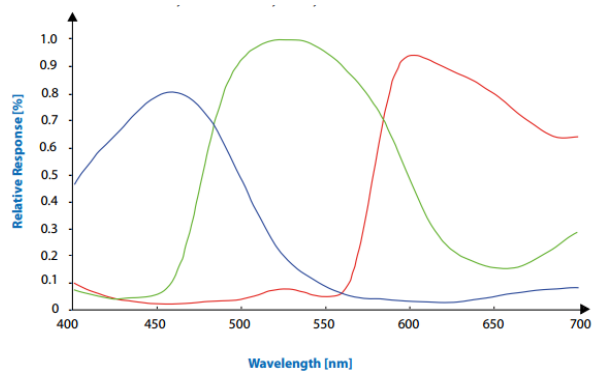MGI401C

MGC500M
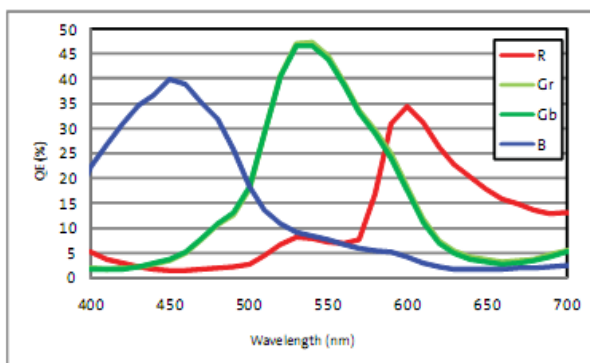
MGC500C

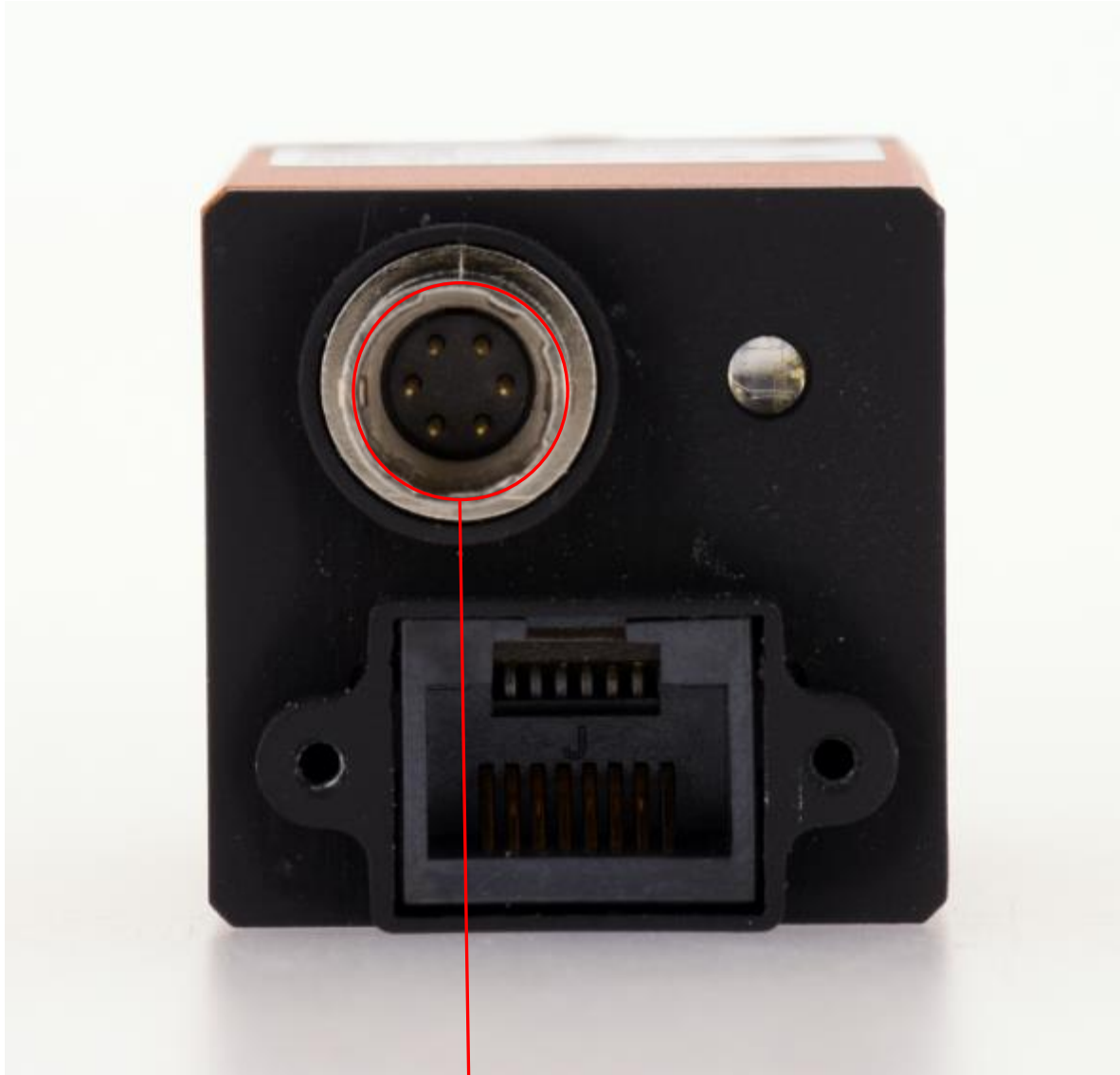

MGS640M

MGS640C

MGC1400C

GPIO External Trigger interface introduction

6PIN Trigger Serial No	1	2	3	4	5	6
Function Definition	POWER_12VIN	TRIGGER_IN1 （5v~24v）	None	TRIGGER_OUT1	TRIGGER_GND	POWER_GND
Cable Color	Red	Black	Yellow	White	Gray	Brown

GigE Interface

From the above picture, you can see the GigE interface.

Note:

1) Please use Super 5 types of network cable or above.

2) Please use the network cable which has fixing screws, please fix the cable to the camera when you are using the camera.

Lens Interface

Note:

1) The cameras adopt standard C-mount lens interface, can be compatible with manual C-mount lenses.

Compatible Software

The cameras meet GigE Vision 1.2 protocol, can be compatible with the software which has GigE Vision protocol driver functions. The software in the following table have been tested and compatible:

Software Name	Software Version
JAI SDK	JAI SDK Version 1.4.0 32bit
	JAI SDK Version 1.4.1 64bit
NI LABVIEW	NI Vision Acquisition Software 2013 / 2014
HALCON	HALCON 10.0 / 11.0
Visionpro	Version 7.2 / 8.2