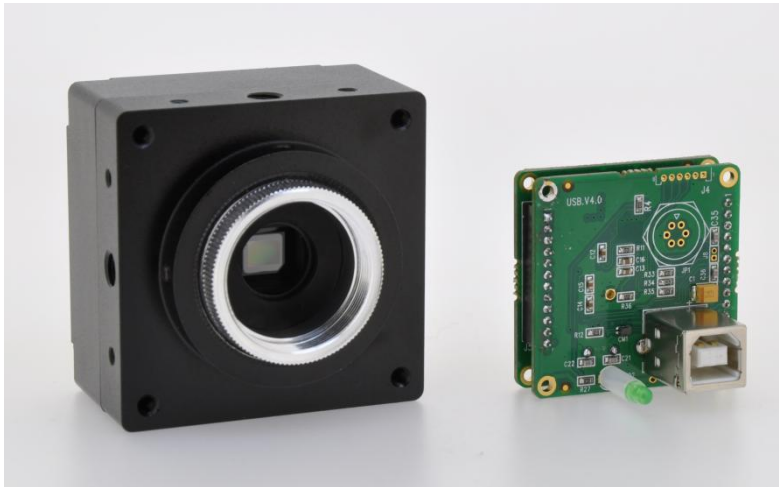


## Gauss2 Series Industrial Digital Cameras



### Introduction

Gauss2 series industrial digital cameras are middle size digital cameras. With USB2.0 interface, 1.3MP, 3,2MP(only color), 5.0MP color and mono digital cameras are available. These digital cameras have high sensitivity, high dynamic range, rolling shutter, high-speed features with very competitive price. Gauss2 series digital cameras are widely used in machine vision and various image acquisition areas.

### Features

1. Aptina series CMOS image sensor, Max. 1/2", rolling shutter;
2. Support 1.3MP@15fps mono/color, 3.0MP@7fps color, 5.0MP@4fps mono/color
3. High-speed USB2.0 interface, up to 480Mb/s, multi cameras can be connected to one PC for high speed image capture;
4. The camera and camera module can work with lens of M12 interface, can reduce the cost and installation space for users;
5. Support users to write the serial number of the camera, provide 1024k space for the configuration data writing;
6. Support users to choose AOI(Area of Interest), the frame rate speed up after cutting;
7. Separate image preview and capture, support SKIP2 /SKIP3/SKIP4/SKIP8 skip mode, the frame rate speed up double after skip;
8. Support binning mode, reduce the noise to be minimum, make the image quality better;
9. The brightness after mode and resolution switchover is the same;
10. Contrast, brightness adjustment, Gamma correction, RGB gain, color reproduction is more realistic;
11. Support still image capture (JPG, BMP) and video capture(AVI, Uncompressed or compressed), image color is rich and vivid;
12. Software control auto white balance, auto exposure, continuous auto exposure;
13. User can program control white balance area, exposure area;
14. Support recovery after pulling out and plug during capture and preview;
15. Support firmware upgrade on-line;
16. Plug and play, no need external power supply, Max. Power consumption is only 2.5W;

17. Support VC, VB, DELPHI, LABVIEW and other development language;
18. Support Windows XP / Vista / 7 / 8 / 10 (32&64 bit) Operation System, can customize Linux-Ubuntu and Android driver;
19. Support 8-bit, 24-bit, 32-bit bitmap preview and capture(Mono cameras support 8-bit bitmap);
20. Provide completed API for users' secondary development, provide Demo Source Code;
21. Support C-mount interface and customize lens interface;
22. CNC machining high precise aluminum alloy shell, dimension 54x54x45mm, weight 165g;
23. Provide 3 years warranty.

## Application

Gauss2 series industrial cameras are mainly designed for machine vision and various image acquisition areas. They are mainly used for following areas:

### Medical and life sciences Area

- ❖ Microscope Imaging
- ❖ Medical diagnosis
- ❖ Gel Imaging
- ❖ Live Cell Imaging
- ❖ Ophthalmology and iris imaging

### Industrial Area

- ❖ Electronics and semiconductor inspection
- ❖ Visual positioning(SMT/AOI/Glue dispenser)
- ❖ Surface defect detection
- ❖ 3D scanning machine
- ❖ Printing quality inspection
- ❖ Food and medicine bottles inspection
- ❖ Robot welding
- ❖ Tag OCR/OCV identification
- ❖ Robot arm visual positioning
- ❖ Industrial production line monitoring
- ❖ Vehicle wheel alignment machine
- ❖ Industrial Microscope
- ❖ Road toll and traffic monitoring
- ❖ High speed vehicle plate image capture

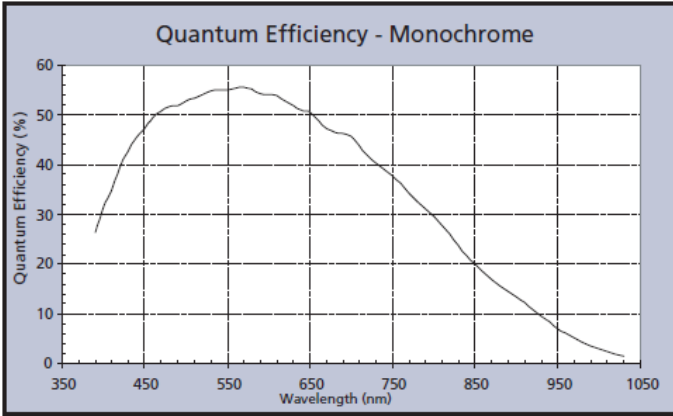
### Public security and investigation

- ❖ Biometrics
- ❖ Fingerprint, palm print image capture
- ❖ Facial recognition
- ❖ License image capture
- ❖ Documents and notes image capture and identification
- ❖ Spectroscopy testing equipment

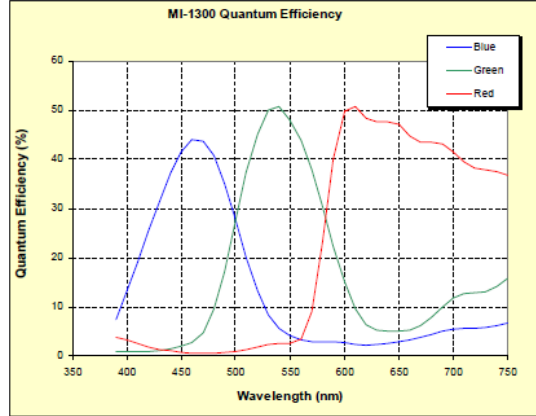
**Specification**

Model	UC130M/C(MRNN)	UC320C(MRNN)	UC500M/C(MRNN)
Sensor Model	Aptina MT9M001	Aptina MT9T001	Aptina MT9P031
Color	Mono/Color	Color	Mono/Color
Image Sensor	CMOS	CMOS	CMOS
Sensor Size	1/2"	1/2"	1/2.5"
Effective Pixels	1.3MP	3.2MP	5.0MP
Pixel Size	5.2 $\mu$ m $\times$ 5.2 $\mu$ m	3.2 $\mu$ m $\times$ 3.2 $\mu$ m	2.2 $\mu$ m $\times$ 2.2 $\mu$ m
Sensitivity	1.8V/lux-sec	1.0V/lux-sec	1.4V/lux-sec
Max. Resolution	1280 $\times$ 1024	2048 $\times$ 1536	2592 $\times$ 1944
Frame Rate	15fps	6fps	4fps
Exposure Mode	Rolling Shutter	Rolling Shutter	Rolling Shutter
Dot Frequency	48MHz	48MHz	48MHz
Dynamic Range	68.2dB	61dB	70.1dB
Signal Noise Rate	45dB	43dB	38.1dB
Frame Buffer	No	No	No
Scan Mode	Progressive Scan		
GPIO Control	Yes, optional, Optocoupler isolation GPIO		
White Balance	Auto / Manual, software/hardware		
Exposure Control	Auto / Manual, software/hardware		
Main Function	Image preview, Image Capture(bmp, jpg, tiff), Video Record( compressor is optional)		
Programmable Control	Preview FOV AOI, Capture FOV AOI, SKIP/Binning mode, Contrast, Brightness, Saturation, Gamma value, color gain, exposure, dead pixels remove, focus evaluation, custom serial number (0 to 255)		
Data Output	USB2.0, 480Mb/s		
Power Supply	USB2.0 Power Supply, 200-300mA@5V		
Compatible Interface	ActiveX, Twain, DirectShow, VFW		
Operation System	Windows XP/VISTA/7/8/10 32&64 bit, Linux-Ubuntu 32&64 bit, ARM Linux		
SDK	Support VB, VC, C#, DELPHI developing Language, LABVIEW, OPENCV, HALCON, MIL third-party machine vision software		
Lens Interface	Standard C-Mount, CS and M12 mount are optional		
Work Temperature	0 $^{\circ}$ C~60 $^{\circ}$ C		
Storage Temperature	-30 $^{\circ}$ C~70 $^{\circ}$ C		
Camera Dimension	54mm $\times$ 54mm $\times$ 45mm(W $\times$ H $\times$ L)		
Module Dimension	39mm $\times$ 39mm $\times$ 29.5mm(W $\times$ H $\times$ L)		
Camera Weight	Camera is 165g, module is 30g		
Accessories	Equipped with standard infrared filter(not available in mono camera), 3m USB cable with fixing screws, 1 CD with software and SDK.		
Box Dimension	118mm $\times$ 108mm $\times$ 96mm (length $\times$ width $\times$ height)		

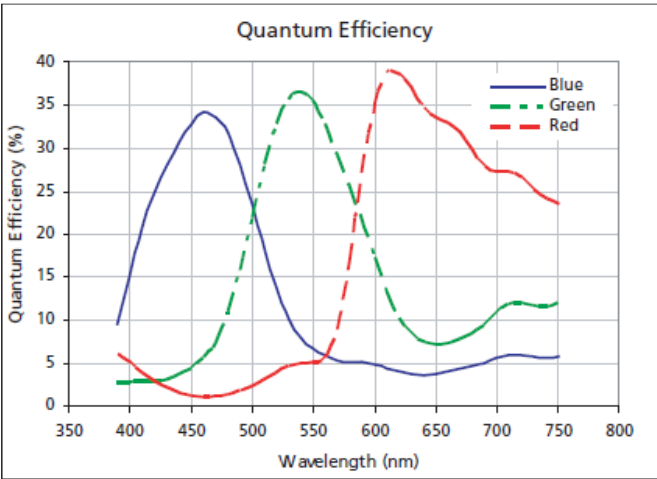
### Spectral Response Curve



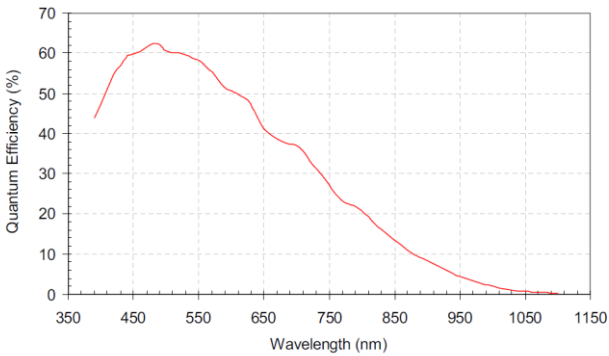
UC130M(MRNN)



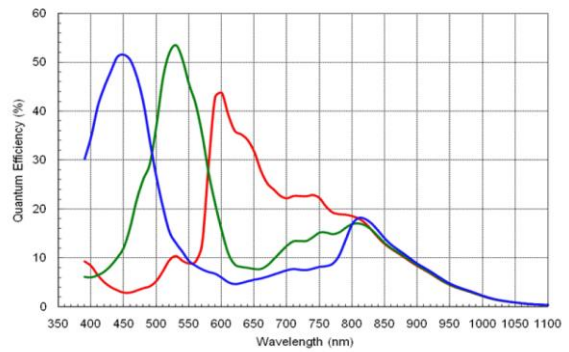
UC130C(MRNN)



UC320C(MRNN)

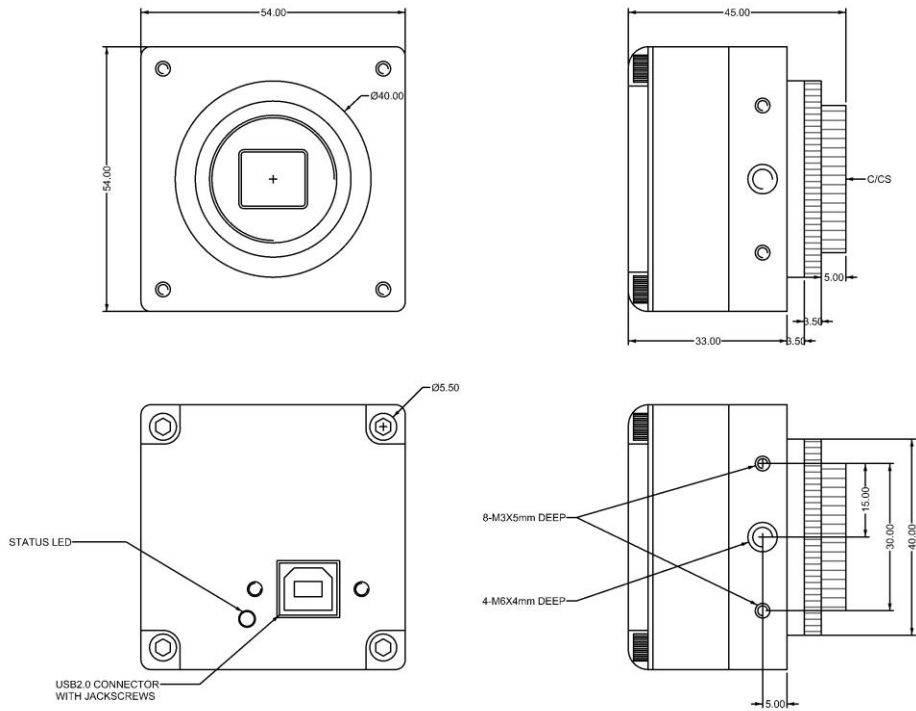


UC500M(MRNN)



UC500C(MRNN)

Dimension



Digital camera with Case

