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G3CMOS Series M42+2 USB3.0 CMOS Guiding Camera

SONY Exmor, Exmor R(Back-illuminated), Exmor RS CMOS sensor with USB3.0 interface;

Super high sensitivity;

Ultra low noise and low power dissipation by using column-parallel A/D conversion;

Long time exposure supported up to 1000s;

Resolutions range from 1.2M to 20M;

Rolling shutter or global shutter;

External fan cooling, controllable;

Unique internal cooling structure to help heat radiation;

Standard M42+2 inch Mount camera;

CNC aluminum alloy housing;

Real-time 8/12/14/16bit depth switch(depending on sensor);

USB3.0 5Gbps interface ensuring high frame rates;

With advanced video & image processing application ToupSky;

Windows/Linux/macOS/Android multiple platform SDK;



Specification

G3CMOS Series M42+2" USB3.0 CMOS Guiding Camera (13)

ToupTek G3CMOS series camera is an Astronomy camera that adopts SONY Exmor, Exmor R and Exmor RS CMOS sensor as the image-picking device and USB3.0 is used as the data transfer interface. High sensitivity and low noise to achieve the CCD quality image is the most well-known advantages of G3CMOS series cameras.

G3CMOS camera's hardware resolutions range from 2.3M to 20M and come with the integrated CNC aluminum alloy compact housing.

G3CMOS comes with advanced video & image processing application (ToupSky for astronomy application); Providing Windows/Linux/macOS/Android multiple platform SDK(Native C/C++, C#/VB.NET, Python, Java, DirectShow, Twain, etc);

The G3CMOS camera family can be widely used in astronomy application.

Order Code	Sensor & Size(mm)	Pixel(μm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure
G3CMOS21000KPA	21M/IMX269(C)	3.3 x3.3	400mv with 1/30s	18@5280x3956	1x1	0.1ms~3600s

GP121000A(New)	4/3”(17.4x13.1)		0.1mv with 1/30s	18@3952x3952 18@2640x1978 75@1760x1318 216@584x440	1x1 2x2 3x3 9x9	
G3CMOS20000KPA GP120000A(New)	20M/IMX183(C) 1”(13.056x8.755)	2.4 x2.4	462mv with 1/30s 0.21mv with 1/30s	17.5@5440x3648 26@2736x1824 26@1824x1216	1x1, 2x2, 3x3	0.1ms- 1000s
G3CMOS20000KMA GM120000A (New)	20M/IMX183(M) 1”(13.056x8.755)	2.4 x2.4	388mv with 1/30s 0.21mv with 1/30s (F8.0)	17.5@5440x3648 40@4080x2160 48@2736x1824 60@1824x1216	1x1, 1x1, 2x2, 3x3	0.1ms- 1000s
G3CMOS16000KPA GP116000A	16M/MN34230PLJ(C) 4/3”(17.6x13.3)	3.8x3.8	2413LSB 89.1LSB (Gain = 0dB)	22.5@4648x3506 43.0@2304x1750 48.0@1536x1168	1x1 2x2 3x3	0.06ms- 1000s
G3CMOS16000KMA GM116000A	16M/MN34230ALJ(M) 4/3”(17.6x13.3)	3.8x3.8	2650LSB 89.1LSB (Gain = 0dB)	22.5@4648x3506 43.0@2304x1750 48.0@1536x1168	1x1 2x2 3x3	0.06ms- 1000s
G3CMOS10300KPA GP110300A (New)	10.3M/IMX294(C) 4/3”(17.47x12.86)	4.63 x4.63	419mv with 1/30s 0.12mv with 1/30s	33.5@3704x2778 38.5@4096x2160 65@2048x1080 96@1360x720	1x1, 1x1, 2x2, 3x3	0.1ms- 1000s
G3CMOS08300KPA GP108300A	8.3M/IMX485(C) 1/1.2”(11.14x6.26)	2.9x2.9	2188mv with 1/30s 0.15mv with 1/30s	43@3840x2160 66@1920x1080	1x1 2x2	0.1ms- 1000s
G3CMOS06300KPA GP106300A	6.3M/IMX178(C) 1/1.8”(7.37x4.92)	2.4x2.4	425mv with 1/30s 0.15mv with 1/30s	15@3072x2048 26@1536x1024	1x1, 2x2	0.244ms- 1000s
G3CMOS06300KMA GM106300A	6.3M/IMX178(M) 1/1.8”(7.37x4.92)	2.4x2.4	380mv with 1/30s 0.15mv with 1/30s	51@3072x2048 35@1536x1024	1x1, 2x2	0.244ms- 1000s
G3CMOS02300KPA GP102300A	2.3M/IMX185(C) 1/1.9”(7.20x4.5)	3.75x3.75	1120mv with 1/30s 0.15mv with 1/30s	38@1920x1200 66@960x600	1x1, 2x2	0.244ms- 1000s
G3CMOS02300KPB GP102300A	2.3M/IMX302(C,GS) 1/1.2”(7.20x4.5)	5.86x5.86	1016mv with 1/30s 0.15mv with 1/30s	30@1920x1200	1x1	0.244ms- 1000s
G3CMOS02300KMC GM102300A	2.3M/IMX174(M,GS) 1/1.2”(7.20x4.5)	5.86x5.86	1016mv with 1/30s 0.15mv with 1/30s	30@1920x1200	1x1	0.244ms- 2000ms
G3CMOS01200KPA GP101200A	2.3M/IMX185(C) 1/1.9”(7.20x4.5)	3.75x3.75	2350mv with 1/30s 0.15mv with 1/30s	60@1280x960 60@640x480	1x1, 2x2	0.244ms- 1000s

OTHER HARDWARE CONFIGURATION

Spectral Range	380-650nm (with IR-filter), 350-1050nm(with Double Side AR Coating Protect Window)
White Balance	ROI White Balance/ Manual Temp-Tint Adjustment
Color Rendering Technique	Ultra Fine Color Engine
Capture/Control SDK	Windows/Linux/macOS/Android Multiple Platform SDK(Native C/C++, C#/VB.NET, Python, Java, DirectShow, Twain, etc);
Recording System	Still Picture and Movie
Guiding Port	ASCOM ST4-port
Cooling System*	Natural with High Performance Cooling Structure;

OPERATING ENVIRONMENT

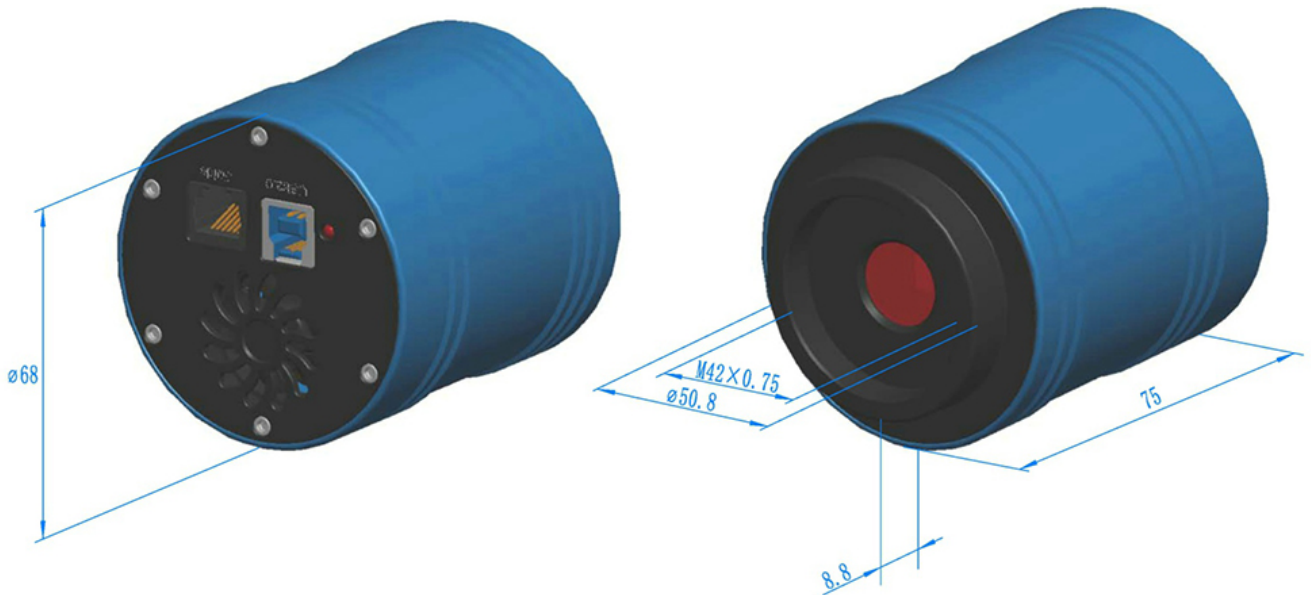
Operating Temperature	-10°C- 50°C
Storage Temperature	-20°C- 60°C
Operating Humidity	30-80%RH
Storage Humidity	10-60%RH
Power Supply	DC 5V over PC USB Port

SOFTWARE ENVIRONMENT

Operating System	Support Microsoft Windows XP / Vista / 7 / 8 / 10(32 & 64 bit) OS X (Mac OS X), Linux
PC Requirements	CPU: Equal to Intel Core2 2.8GHz or Higher
	Memory: 2GB or More
	USB port: USB2.0 High-speed Port
	Display: 17" or Larger CD-ROM

G3CMOS Series M42+2" USB3.0 CMOS Guiding Camera Dimension

Installation drawings(Click to enlarge). The G3CMOS body, made from CNC aluminum alloy, ensures a heavy duty, workhorse solution. The camera is designed with a high quality IR-CUT filter or double-side AR glass to protect the camera sensor. No moving parts included. These measures ensure a rugged, robust solution with an increased lifespan when compared to other industrial camera solutions.



Dimension of G3CMOS Camera

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