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## MTR3CMOS Series TE-Cooling C-mount USB3.0 CMOS Camera

Standard C-Mount camera with SONY Exmor CMOS sensors from 1.7M to 45M;

Two-stage TE-cooling with controllable electric fan;

Sensor chip cooling up to 42°C below ambient temperature;

Working temperature can be regulated to specified temperature in 5 minutes;

Smart structure to assure the heat radiation efficiency and avoid the moisture problem;

IR-CUT/AR coated windows;

Up to 1 hour long time exposure;

USB3.0 5Gbit/second interface ensuring high speed data transmission;

Ultra-Fine™ color engine with perfect color reproduction capability;

With advanced video & image processing application ToupView;

Support both video and trigger modes;

Windows/Linux/macOS/Android multiple platform SDK;



### Specification

## MTR3CMOS Series TE-Cooling C-mount USB3.0 CMOS Camera(16)

The MTR3CMOS adopt SONY Exmor CMOS sensor as the image-picking device and USB3.0 is used as the transfer interface. MTR3CMOS hardware resolutions range from 1.7M to 45M and come with the integrated CNC aluminum alloy compact housing.

With the two-stage peltier cooling sensor chip to -42 degree below ambient temperature. This will greatly increase the signal to noise ratio and decrease the image noise. Smart structure is designed to assure the heat radiation efficiency and avoid the moisture problem. Electric fan is used to increase the heat radiation speed.

MTR3CMOS comes with advanced video & image processing application ToupView; Providing Windows/Linux/macOS/ Android multiple platform SDK(Native C/C++, C#/VB.NET, Python, Java, DirectShow, Twain, etc);

The MTR3CMOS can be widely used in low light environment and microscope fluorescence image capture and analysis, as well as the astronomy deep sky application.

Order Code	Sensor & Size(mm)	Pixel(μm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure
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<a href="#">MTR3CMOS45000KMA</a> <a href="#">MTRM145000A(2020)</a>	45M/IMX492(M) 4/3”(19.11x13.00)	2.315 x2.315	351mV with 1/30s 0.12mV with 1/30s	8@8256x5616 31@4128x2808	1x1 2x2	0.1ms-3600s
<a href="#">MTR3CMOS26000KPA</a> <a href="#">MTRP126000A</a>	26M/IMX571(C) 1.8”(23.48x15.67) APS-C	3.76 x3.76	485mv with 1/30s 0.07mv with 1/30s	6.8@6224x4168(16bit) 14@6224x4168 37@3104x2084 110@2064x1386	1x1 1x1 2x2 3x3	0.1ms-3600s
<a href="#">MTR3CMOS26000KMA</a> <a href="#">MTRM126000A</a>	26M/IMX571(M) 1.8”(23.48x15.67) APS-C	3.76 x3.76	871mv with 1/30s 0.07mv with 1/30s	6.8@6224x4168(16bit) 14@6224x4168 37@3104x2084 110@2064x1386	1x1 1x1 2x2 3x3	0.1ms-3600s
<a href="#">MTR3CMOS21000KPA</a> <a href="#">MTRP121000A</a>	21M/IMX269(C) 4/3”(17.4x13.1)	3.3 x3.3	400mv with 1/30s 0.1mv with 1/30s	5@5280x3956 6@3952x3952 15@2640x1978 50@1760x1318 100@584x440	1x1 1x1 2x2 3x3 9x9	0.1ms-3600s
<a href="#">MTR3CMOS20000KPA</a> <a href="#">MTRP120000A</a>	20M/IMX183(C) 1”(13.056x8.755)	2.4 x2.4	462mv with 1/30s 0.21mv with 1/30s	5@5440x3648 10@4096x2160 15@2736x1824 30@1824x1216	1x1 1x1 2x2 3x3	0.1ms-3600s
<a href="#">MTR3CMOS20000KMA</a> <a href="#">MTRM120000A</a>	20M/IMX183(M) 1”(13.056x8.755)	2.4 x2.4	388mv with 1/30s 0.21mv with 1/30s (F8.0)	17.8@5440x3648 41@4096x2160 51@2736x1824 64@1824x1216	1x1 1x1 2x2 3x3	0.1ms-3600s
<a href="#">MTR3CMOS16000KPA</a> <a href="#">MTRP116000A</a>	16M/MN34230PLJ(C) 4/3”(17.6x13.3)	3.8x3.8	2413LSB 89.1LSB (Gain = 0dB)	6@4640x3506 20@2304x1750 48.0@1536x1160	1x1 2x2 3x3	0.15ms-3600s
<a href="#">MTR3CMOS16000KMA</a> <a href="#">MTRM116000A</a>	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	0.15ms-3600s
<a href="#">MTR3CMOS10300KPA</a> <a href="#">MTRP110300A</a>	10.3M/IMX294(C) 4/3”(19.11x13.0)	4.63 x4.63	419mv with 1/30s 0.12mv with 1/30s	30.2@4128x2808 38.5 @4096x2160 69.5@2048x1080 96.1@1360x720	1x1 1x1 2x2 3x3	0.15ms-3600s
<a href="#">MTR3CMOS10300KMA</a> <a href="#">MTRM110300A(2021)</a>	10.3M/IMX492(M) 4/3”(19.11x13.0)	4.63 x4.63	701mv with 1/30s 0.12mv with 1/30s	33.3@4128*2808 8.0@ 8184*5616 69.5@2048*1080 96.2@1360*720	1x1 Quad* 2x2 3x3	0.15ms-3600s
<a href="#">MTR3CMOS09000KPA</a> <a href="#">MTRP109000A</a>	9M/IMX533(C) 1”(11.28x11.28)	3.76 x3.76	534mv with 1/30s 0.1mv with 1/30s	20@2992x3000(14bit) 40@2992x3000 62@1488x1500 186@992x998	1x1 1x1 2x2 3x3	0.1ms-3600s
<a href="#">MTR3CMOS08300KPA</a> <a href="#">MTRP108300A</a>	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-3600s
<a href="#">MTR3CMOS07100KPA</a> <a href="#">MTRP107100A</a>	7.0M/IMX428(C, GS) 1.1”(14.4x9.9)	4.5 x4.5	2058mv with 1/30s 0.15mv with 1/30s	12@3200x2200 33@1600x1100	1x1 1x1	0.1ms-3600s
<a href="#">MTR3CMOS07100KMA</a> <a href="#">MTRM107100A</a>	7.0M/IMX428(M, GS) 1.1”(14.4x9.9)	4.5 x4.5	3354mv with 1/30s 0.15mv with 1/30s	51@3200x2200 133@1600x1100	1x1 1x1	0.1ms-3600s
<a href="#">MTR3CMOS01700KPA</a> <a href="#">MTRP101700A</a>	1.7M/IMX432(C, GS) 1.1”(14.4x9.9)	9.0 x9.0	4910mv with 1/30s 0.3mv with 1/30s	33@1600x1100	1x1	0.1ms-3600s
<a href="#">MTR3CMOS01700KMA</a> <a href="#">MTRM101700A</a>	1.7M/IMX432(M, GS) 1.1”(14.4x9.9)	9.0 x9.0	8100mv with 1/30s 0.3mv with 1/30s	94@1600x1100	1x1	0.1ms-3600s

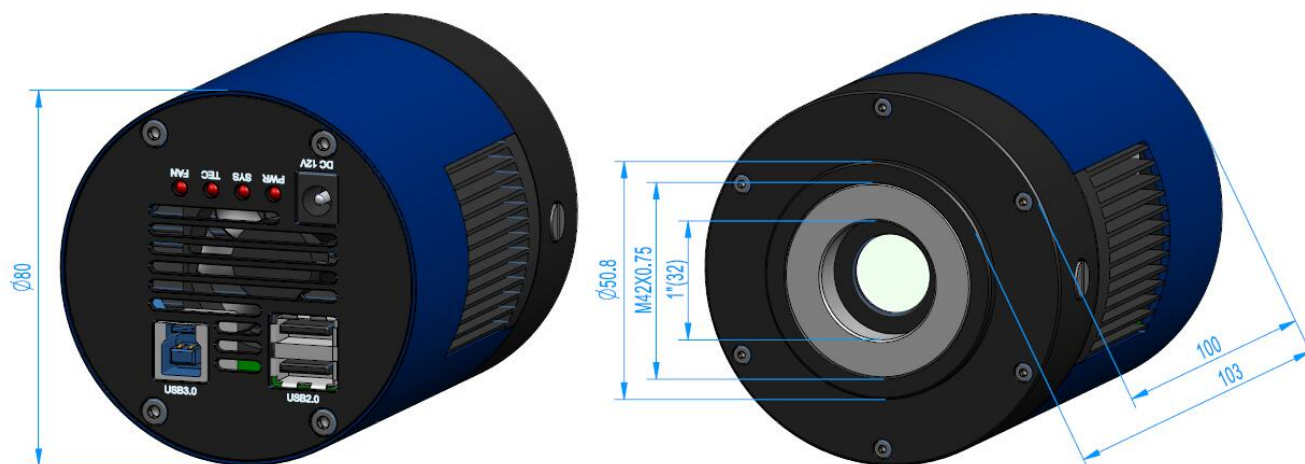
#### OTHER HARDWARE CONFIGURATION

Spectral Range	380-650nm (with IR-filter), for Monochromatic Camera, AR Is Used
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
Cooling System*	Two-stage TE-cooling System -42 °C below Camera Body Temperature
<b>OPERATING ENVIRONMENT</b>	
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 External Power Adapter for Cooling System, DC12V,3A
<b>SOFTWARE ENVIRONMENT</b>	

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

## Dimension of MTR3CMOS Series Camera

Installation drawings(Click to enlarge). The MTR3CMOS body, made from CNC aluminum alloy, ensures a heavy duty, workhorse solution. The camera is designed with a high quality IR-CUT to protect the camera sensor. No moving parts included. This design ensures a rugged, robust solution with an increased lifespan when compared to other industrial camera solutions.



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