

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

USB 3.0 / CMOS SENSOR / C-MOUNT



UCMOS Series C-mount USB2.0 CMOS Camera

Standard C-Mount camera with SONY Exmor CMOS sensors from 0.5M 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.

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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 0.5M to 45M and come with the integrated CNC aluminum alloy compact housing.

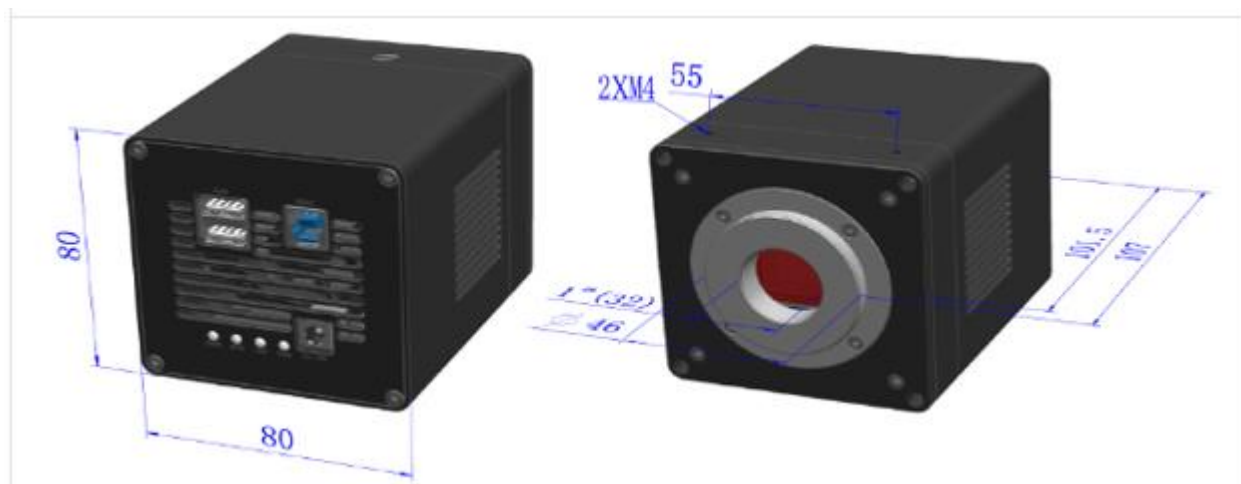
With the two-stage Peltier cooling sensor chip to -42 degree below ambient temperature. This will greatly increase the signal to noise ratio and decrease the image noise. Smart structure is designed to assure the heat radiation efficiency and avoid the moisture problem. Electric fan is used to increase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

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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Order Code	Sensor & Size (mm)	Pixel (μm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure
MTR3CMOS10300KPA MTRP110300A	10.3M/IMX294(C) 4/3 "(19.11x13.0)	4.63 x4.63	419mv with 1/30s 0.12mv with 1/30s	30.0@4128x2808 38.5 @4096x2160 59.8@2048x1080 87.2@1360x720 8 Bit / 14 Bit	1x1 1x1 2x2 3x3	0.15ms~1h
MTR3CMOS16000KPA MTRP116000A	16M/MN34230PLJ(C) 4/3 "(17.6x13.3)	3.8x3.8	2413LSB 89.1LSB (Gain = 0dB)	6@4640x3506 20@2304x1750 48.0@1536x1160 8 Bit / 12 Bit	1x1 2x2 3x3	0.15ms~1h
MTR3CMOS20000KPA MTRP120000A	20M/IMX183(C) 1 "(13.056x8.755)	2.4 x2.4	462mv with 1/30s 0.21mv with 1/30s	19.0@5440x3648 48.8@2736x1824 59.4@1824x1216 8 Bit / 12 Bit	1x1 2x2 3x3	0.1ms~1h

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

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 External Power Adapter for Cooling System, DC12V,3A
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

Packing Information of UCMOS



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STANDARD CAMERA PACKING LIST

A	Carton L:50cm W:30cm H:30cm (20pcs, 12~17Kg/ carton), not shown in the photo (TBD)
B	3-A safety equipment case: L:28cm W:23cm H:15cm (1pcs, 2.8Kg/ box); Carton size: L:28.2cm W:25.2cm H:16.7cm (TBD)
C	MTR3CMOSseries camera
D	Drying tube and desiccant
E	Power adapter: input: AC 100-240V, 50Hz/60Hz, output: DC12V 3A
F	High-speed USB3.0 A male to B male gold-plated connectors cable /1.5m
G	CD (Driver & utilities software, Ø12cm)

OPTIONAL ACCESSORY

H	Adjustable lens adapter	C-mount to Dia.23.2mm eyepiece tube (Please choose 1 of them for your microscope)	108001/AMA037 108002/AMA050 108003/AMA075
		C-mount to Dia.31.75mm eyepiece tube (Please choose 1 of them for your telescope)	108008/ATA037 108009/ATA050 108010/ATA075
G	Fixed lens adaptor	C-mount to Dia.23.2mm eyepiece tube (Please choose 1 of them for your microscope)	108005/FMA037 108006/FMA050 108007/FMA075
		C-Mount to Dia.31.75mm Eyepiece Tube (Please choose 1 of them for your telescope)	108011/FTA037 108012/FTA050 108013/FTA075
	Note : For F and G optional items, please specify your camera type (C-mount, microscope camera or telescope camera), ToupTek engineer will help you to determine the right microscope or telescope camera adapter for your application;		
J	108015(Dia.23.2mm to 30.0mm Ring)/Adaptor rings for 30mm eyepiece tube		
K	108016(Dia.23.2mm to 30.5mm Ring)/ Adaptor rings for 30.5mm eyepiece tube		
L	Calibration Lit	106011/TS-M1(X=0.01mm/100Div.) 106012/TS-M2(X, Y=0.01mm/100Div.); 106013/TS-M7(X=0.01mm/100Div., 0.10mm/100Div.)	