



MICAPS SVTEC3CMOS SERIES

C-mount USB3.0 CMOS Cameras
SONY PREGIUS CMOS Sensor



The SVTEC3CMOS series camera is equipped with a high-quality SONY Exmor CMOS sensor for capturing images. It utilizes USB 3.0/GigE as the transfer interface to enhance the frame rate. SVTEC3CMOS hardware resolutions range from 0.39M to 45M and come with the integrated CNC aluminum alloy compact housing.

Thanks to the peltier cooling sensor chip, the temperature is lowered by 5-10 degrees below the ambient level. This significantly improves the signal-to-noise ratio and reduces image noise. The camera is designed with a smart structure to ensure efficient heat radiation and prevent moisture issues. An electric fan is incorporated to speed up the heat radiation process. Working temperature can be regulated to specified temperature in 5 minutes.

The SVTEC3CMOS series includes an advanced video and image processing application called MicroView/MicroLite. It offers a versatile software development kit (SDK) compatible with Windows, Linux, and OSX platforms. It supports Native C/C++, C#/VB.NET, DirectShow, and Twain Control API.

This camera is well-suited for applications in low-light environments, microscope fluorescence image capture and analysis, and deep-sky astronomy.

Features

- TE-cooling with controllable electric fan
- Rolling Shutter or Global Shutter
- IR-CUT/AR coated windows
- Up to 5-minutes long time exposure
- Support capture image with video /trigger mode
- Support external IO synchronization trigger mode
- Super-Fine color engine with perfect color reproduction capability
- With advanced video & image processing application MicroView/MicroLite

Applications

- Scientific research, education (teaching, demonstration and academic exchanges)
- Digital laboratory, medical research
- Industrial visual (PCB examination, IC quality control)
- Medical treatment (pathological observation)
- Food (microbial colony observation and counting)
- Aerospace, military (high sophisticated weapons)

Order Code	Sensor & Size(mm)	Pixel(μm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure
SVTEC3CMOS390MA	0.39M/IMX287(M) 1/2.9"(4.97x3.73)	6.9 x6.9	7320mV with 1/30s 0.76mV with 1/30s	20fps@720x540 8 Bit / 12 Bit	1x1	6us~300s
SVTEC3CMOS503MA	0.5M/IMX426(M) 1/1.7"(7.2x5.58)	9.0 x9.0	8100mV with 1/30s 0.3mV with 1/30s	20fps@800x620 8 Bit / 12 Bit	1x1	6us~300s
SVTEC3CMOS7100CA	7.0M/IMX428(C,GS) 1.1 "(14.4x9.9)	4.5 x4.5	2058mv with 1/30s 0.15mv with 1/30s	51.3fps@3200x2200 133.8fps@1584x1100 8 Bit / 12 Bit	1x1 1x1	6us~300s
SVTEC3CMOS7100MA	7.0M/IMX428(M,GS) 1.1 "(14.4x9.9)	4.5 x4.5	3354mv with 1/30s 0.15mv with 1/30s	51.3fps@3200x2200 133.8fps@1584x1100 8 Bit / 12 Bit	1x1 1x1	6us~300s
SVTEC3CMOS1700CA	1.7M/IMX432(C,GS) 1.1 "(14.4x9.9)	9.0 x9.0	4910mv with 1/30s 0.3mv with 1/30s	98.6fps@1600x1100 8 Bit / 12 Bit	1x1	6us~300s
SVTEC3CMOS1700MA	1.7M/IMX432(M,GS) 1.1 "(14.4x9.9)	9.0 x9.0	8100mv with 1/30s 0.3mv with 1/30s	98.6fps@1600x1100 8 Bit / 12 Bit	1x1	6us~300s
SVTEC3CMOS20000CA	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	53us~300s
SVTEC3CMOS20000MA	20M/IMX183(M) 1 "(13.056x8.755)	2.4 x2.4	776mv with 1/30s 0.21mv with 1/30s	19.0@5440x3648 48.8@2736x1824 59.4@1824x1216 8 Bit / 12 Bit	1x1 2x2 3x3	53us~300s
SVTEC3CMOS45000MA	45M/IMX492(M) 4/3"(19.11x13.00)	2.315 x2.315	351mV with 1/30s 0.12mV with 1/30s	8.1@8176x5616 30.0@4080x2808 8.1@7408x5556 33.0@3696x2778 10.4@8176x4320 34.7@4096x2160 62.5@2048x1080 86.5@1360x720 8 Bit / 12 Bit	1x1(3:2) 2x2(3:2) 1x1(4:3) 2x2(4:3) 1x1(17:9) 2x2(17:9) 3x3(17:9) 4x4(17:9)	0.1ms~300s

Order Code	Sensor & Size(mm)	Pixel(μm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure
SVTEC3CMOS1700CA-G	1.7M/IMX432(C,GS) 1.1 "(14.4x9.9)	9.0 x9.0	4910mv with 1/30s 0.3mv with 1/30s	66fps@1600x1100 8 Bit / 12 Bit	1x1	6us~300s
SVTEC3CMOS1700MA-G	1.7M/IMX432(M,GS) 1.1 "(14.4x9.9)	9.0 x9.0	8100mv with 1/30s 0.3mv with 1/30s	66fps@1600x1100 8 Bit / 12 Bit	1x1	6us~300s
SVTEC3CMOS7100CA-G	7.0M/IMX428(C,GS) 1.1 "(14.4x9.9)	4.5 x4.5	2058mv with 1/30s 0.15mv with 1/30s	16.4fps@3200x2200 66fps@1600x1100 8 Bit / 12 Bit	1x1 1x1	6us~300s
SVTEC3CMOS7100MA-G	7.0M/IMX428(M,GS) 1.1 "(14.4x9.9)	4.5 x4.5	3354mv with 1/30s 0.15mv with 1/30s	16.4fps@3200x2200 66fps@1600x1100 8 Bit / 12 Bit	1x1 1x1	6us~300s
SVTEC3CMOS20000CA-G	20M/IMX183(C,RS) 1 "(13.056x8.755)	2.4 x2.4	462mv with 1/30s 0.21mv with 1/30s	4.5@5440x3648 18.5@2736x1824 41.7@1824x1216 8 Bit / 12 Bit	1x1 2x2 3x3	53us~300s
SVTEC3CMOS20000MA-G	20M/IMX183(M,RS) 1 "(13.056x8.755)	2.4 x2.4	776mv with 1/30s 0.21mv with 1/30s	4.5@5440x3648 18.5@2736x1824 41.7@1824x1216 8 Bit / 12 Bit	1x1 2x2 3x3	53us~300s

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	External Power Adapter for camera and 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: USB3.0 High-speed Port
	Display: 17" or Larger
	CD-ROM

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	Super 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

Dimension of SVTEC3CMOS Series Camera

The SVTEC3CMOS body, made from CNC aluminium 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.



LABLINK INSTRUMENTS

- Plot no. 337, Sector 2, HSIIDC Saha, Saha, Ambala (Haryana) India - 133104.
- Plot no 3-6-164/2, 2nd Street, Hyderguda Himayathnagar, Hyderabad (Telangana) India - 500029

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