



MICAPS HPTEC3CMOS45000MA

C-mount USB 3.0 CMOS Cameras
SONY PREGIUS CMOS Sensor



The HPTEC3CMOS45000MA camera utilizes a SONY PREGIUS CMOS sensor for capturing images, and it connects via USB 3.0 for efficient data transfer. The camera hardware resolutions is 45MP, housed in a compact CNC aluminum alloy casing with Two-stage TE-cooling. Equipped with a two-stage peltier cooling system, the sensor chip can reach temperatures as low as -42 degrees below the ambient temperature. This feature significantly improves the signal-to-noise ratio and reduces image noise. The camera is designed with a smart structure to enhance heat radiation efficiency and prevent moisture-related issues. An controllable electric fan is incorporated to expedite the heat dissipation process.

The HPTEC3CMOS45000MA comes bundled with the advanced Micaps MicroView application for video and image processing. It supports multiple platforms, including Windows, Linux, macOS, and Android, with SDKs for various programming languages such as Native C/C++, C#/VB.NET, Python, Java, DirectShow, Twain, and more. This camera is well-suited for applications in low-light environments, as well as capturing and analyzing microscope fluorescence images. Additionally, it can be utilized for deep-sky astronomy applications.

Features

- SONY PREGIUS CMOS sensor with USB 3.0 interface
- Peltier Sensor chip cooling up to 42°C below ambient temperature
- Working temperature can be regulated to specified temperature in 5 minutes
- Rolling Shutter
- IR-CUT/AR coated windows
- Up to 1 hour long time exposure
- Super-Fine™ color engine with perfect color reproduction capability Support both video and trigger modes

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)

Model No.	Sensor & Size(mm)	Pixel(μm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure
HPTEC3CMOS45000MA	45M/IMX492(M) 4/3"(19.11x13.00	2.315x2.315	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~1h

Other Hardware Configuration

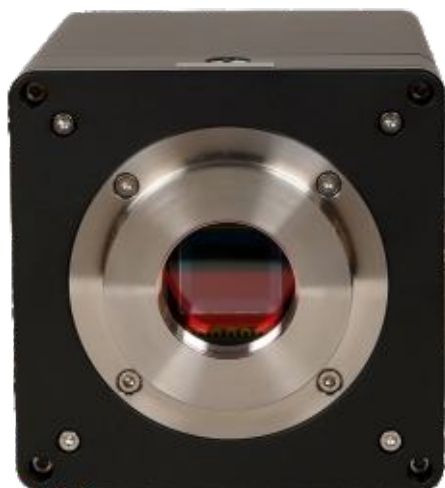
Spectral Range	380-650nm (with IR-filter), for Monochromatic Camera, AR Is Used
White Balance	ROI White Balance/ Manual Temp-Tint Adjustment
Color Rendering Technique	Super Fine Color Engine
Capture/Control SDK	Windows/Linux/macOS/Android Multiple Platform SDK (Native C/C++, C#/VB.NET, Python, Java, DirectShow, Twain, etc)
Recording System	Still Picture and Movie
Cooling System*	Two-stage TE-cooling System -42 °C below Camera Body Temperature

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



LABLINK INSTRUMENTS

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