

MICROS Cam500/ 900 C-mount USB3.0 CMOS Camera with Hardware ISP and Video Pipeline

Cam 500/ 900 Basic Characteristic

Cam 500/ 900 adopt SONY Exmor CMOS sensor as the image-picking device and USB3.0 is used as the transfer interface.

Cam 500/ 900 hardware resolutions range from 5.0M to 9.0M and come with the integrated CNC aluminum alloy compact housing.

Cam 500/ 900 integrated with 12 bit Ultra-fine™ Hardware Image Signal Processor Video Pipeline(Ultra-fine™ HISP VP) for Demosaic, Adjustments, Automatic Exposition, Gain Adjustment, One Push White Balance, Chrominance Adjustment, Saturation Adjustment, Gamma Correction, Luminance Adjustment, Contrast Adjustment, Bayer and finally form RAW data for 8/12 bit output. This will move the heavier burden of the processing from the PC to the Ultra-fine™ HISP VP and greatly accelerating the processing speed.

Cam 500/ 900 comes with advanced video & image processing application ToupView; Providing Windows/Linux/OSX multiple platforms SDK; Native C/C++, C#/VB.NET, DirectShow, Twain Control API;

The **Cam 500/ 900** can be widely used in bright field light environment and microscope image capture and analysis with higher frame rate.

The basic characteristic of Cam 500/ 900 cameras are as follows:

- SONY Exmor, Exmor R(Back-illuminated), Exmor RS CMOS sensor with USB3.0 interface;
- Real-time 8/12bit depth switch(depending on sensor);
- Ultra-fine™ HISP VP and USB3.0 5 Gbps interface ensuring high frame rates(Up to 15 frames for 20M Resolution);
- Super high sensitivity up to 1120mV(IMX264);
- Ultra low noise and low power dissipation by using column-parallel A/D conversion;
- With hardware resolution among 5.0M to 9.0M;
- Rolling Shutter or Global Shutter;
- Standard C-Mount camera;
- CNC aluminum alloy housing;
- With advanced video & image processing application ToupView;
- Providing Windows/Linux/Mac OS multiple platforms SDK;
- Native C/C++, C#/VB.Net, DirectShow, Twain, LabView



E3ISPM Datasheet (13)

| Camera model | Sensor & Size(mm) | Pixel(μ m) | G Sensitivity Dark Signal | FPS/Resolution | Binning | Exposure |
|--------------|--|-----------------|--|------------------------------|------------|-----------|
| Cam 900 | 9.0M/IMX305(C, GS) 1" (14.13x7.45) | 3.45x3.45 | 1146mv with 1/30s 0.15mv with 1/30s | 34@4096x2160 60@2048x1080 | 1x1 1x1 | 0.1ms~15s |
| Cam 500 | 5.0M/IMX264(C, GS) 2/3" (8.45x7.07) | 3.45x3.45 | 1146mv with 1/30s 0.15mv with 1/30s | 35@2448x2048 50@1224x1024 | 1x1 1x1 | 0.1ms~15s |

C: Color; M: Monochrome; GS: Global Shutter

Other Specification for E3ISPM Camera

| | |
|---------------------|--|
| Spectral Range | 380-650nm (with IR-cut Filter) |
| White Balance | ROI White Balance/ Manual Temp Tint Adjustment/NA for Monochromatic Sensor |
| Color Technique | Ultra-fine™ HISPVP /NA for Monochromatic Sensor |
| Capture/Control API | Native C/C++, C# /VB.Net., DirectShow, Twain and Labview |
| Recording System | Still Picture and Movie |
| Cooling System* | Natural |

Operating Environment

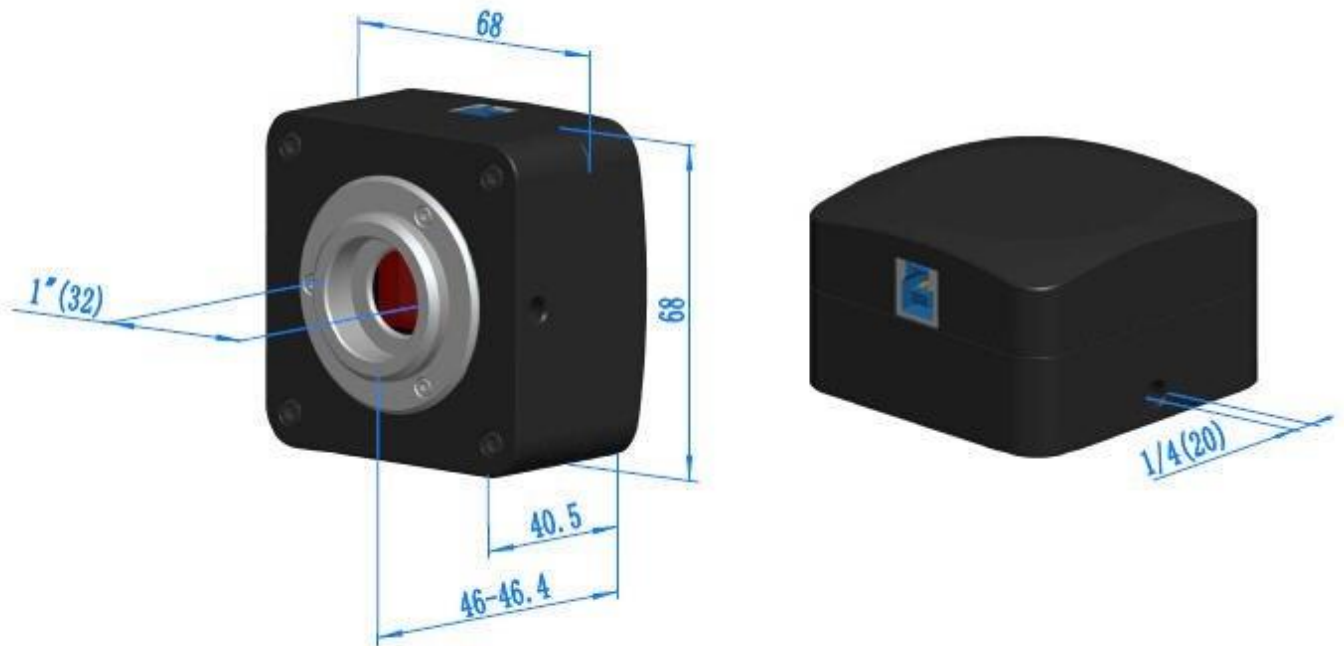
| | |
|---------------------------------------|------------------------|
| Operating Temperature(in Centidegree) | -10~ 50 |
| Storage Temperature(in Centidegree) | -20~ 60 |
| Operating Humidity | 30~80%RH |
| Storage Humidity | 10~60%RH |
| Power Supply | DC 5V over PC USB Port |

Software Environment

| | |
|------------------|--|
| Operating System | Microsoft® Windows® XP / Vista / 7 / 8 /10 (32 & 64 bit) OSx(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 |

Dimension of Cam 500/ 900

The **Cam 500/ 900** body, made from tough, 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.



Dimension of **Cam 500/ 900**

Packing Information for Cam 500/ 900



Packing Information of E3ISPM

Standard Camera Packing List

- | | |
|---|--|
| A | Carton L:52cm W:32cm H:33cm (20pcs, 12~17Kg/ carton), not shown in the photo |
| B | Gift box L:15cm W:15cm H:10cm (0.58~0.6Kg/ box) |
| C | Cam 500/ 900 USB3.0 C-mount CMOS camera |
| D | High-speed USB3.0 A male to B male gold-plated connectors cable /2.0m |
| E | CD (Driver & utilities software, Ø12cm) |