# MICAPS
# TINYCMOS SERIES

## CMOS eyepiece Cameras USB 2.0

Micaps Tinycmos is a budget-friendly CMOS eyepiece camera designed with a simple, compact structure. It uses a USB 2.0 connection for easy data transfer. This microscope eyepiece camera has a 23.2 mm diameter, making it a perfect fit for most standard microscopes. Despite its small size, it delivers smooth, high-frame-rate video over USB 2.0, ensuring a seamless viewing experience without lag.It comes bundled with Micaps' powerful image and video processing software, giving you advanced tools for capturing and analyzing your observations. The Tinycmos is ideal for turning traditional monocular or binocular student microscopes into digital microscopes. And with optional adapters (23.2 to 30 mm or 23.2 to 30.75 mm rings), it can also upgrade stereo microscopes into fully digital systems.

### Features

- Microscope eyepiece camera with 23.2 diameter and compact size
- Easy to extend to C Mount camera with high quality lens (optional)
- High-quality camera with Aptina and Sony CMOS sensor
- High-speed USB2.0 interface and high frame rate video display keep the screen smooth without interruption
- Auto white balance and auto-exposure; Brightness, contrast, chroma, and saturation can be adjusted
- With advanced video & image processing application MICAPS MicroView
- Providing Windows/Linux/Mac OS multiple platforms SDK

### 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<br>Dark Signal | FPS/Resolution | Binning | Exposure |
|---|---|---|---|---|---|---|
| TINYCMOS12000CA | 12M/IMX577(C)<br>1/2.3“ (5.95x4.71) | 1.55x1.55 | 250LSB<br>70dB<br>43dB | 20@3840x3040<br>20@1920x1520<br>20@960x760 | 1x1<br>1x1<br>1x1 | 0.1-2000 ms |
| TINYCMOS00921CA | 0.92M/OV9732(C)<br>1/4“ (3.888x2.208) | 3X3 | 2.066V/lux-sec<br>72dB@8x gain<br>39dB | 30@1280x720<br>30@640x360 | 1x1<br>1x1 | 0.1ms~650ms |
| TINYCMOS08300CA | 8.3M/IMX274(C)<br>1/2.5“ (6.22x3.50) | 1.62x1.62 | 236mV<br>70dB<br>43dB | 30@3840x2160<br>30@1920x1080<br>30@1280x720<br>30@960x540 | 1x1<br>1x1<br>1x1 | 0.1-2000 ms |
| TINYCMOS05100CA | 5.1M/AR0521(C)<br>1/2.5“ (5.70x4.28) | 2.2x2.2 | 18.8ke-/lus<br>73dB<br>40dB | 30@2592x1944<br>30@1280x960<br>30@640x480 | 1x1<br>1x1<br>1x1 | 0.1-1000 ms |
| TINYCMOS05100CB | 5.1M/IMX335(C)<br>1/2.8“ (5.18x3.89) | 2.0x2.0 | 505mV<br>70dB<br>43dB | 26@2592x1944<br>26@1280x960<br>26@640x480 | 1x1<br>1x1<br>1x1 | 0.1-2000 ms |
| TINYCMOS03100CA | 3.1M/Aptina(C)<br>1/2.5“ (5.73x4.3) | 2.8x2.8 | 18.8ke-/lus<br>73dB<br>40dB | 30@2048x1536<br>30@1024x768 | 1x1<br>1x1 | 0.1-1000 ms |
| TINYCMOS02100CA | 2.1M/IMX307(C)<br>1/2.8“ (5.73x4.3) | 2.9x2.9 | 1300mV<br>73dB<br>43dB | 38@1920x1080<br>38@960x540 | 1x1<br>1x1 | 0.1-2000 ms |
| TINYCMOS08300CB | 8.3M/IMX415(C)<br>1/2.8“ (5.57x3.13) | 1.45x1.45 | 300mV<br>70dB<br>44dB | 30@3840x2160<br>30@1920x1080<br>30@1280x720<br>30@960x540 | 1x1<br>1x1<br>1x1<br>1x1 | 0.1-2000 ms |
| TINYCMOS1300CA | 1.3M/Aptina(C)<br>1/3“ (4.60x3.70) | 3.6x3.6 | NA | 7.5@1280x1024<br>12.5@1024x768<br>12.5@800x60 | N/A | Auto |

| Order Code | Sensor & Size(mm) | Pixel(µm) | G Sensitivity<br>Dark Signal | FPS/Resolution | Binning | Exposure |
|---|---|---|---|---|---|---|
| TINYCMOS02100CB | 2.1M/SC2332 (C)<br>1/3“ (5.18x2.92) | 2.7x2.7 | 4510mV/lux-s<br>74dB<br>38.5dB | 30@1920x1080<br>30@960x540 | 1x1<br>1x1 | 0.1-2000 ms |
| TINYCMOS01301CA | 1.3M/Special (C)<br>1/3“ (5.18x2.92) | 3.41x3.41 | 4510mV/lux-s<br>74dB<br>38.5dB | 30@1520x856<br>30@760x428 | 1x1<br>1x1 | 0.1-2000 ms |
| TINYCMOS05000CA | 5.0M/Aptina(C)<br>1/2.5“ (5.70x4.28) | 2.2x2.2 | NA | 2@2592x1944<br>3@2048x1536<br>5@1600x1200<br>7.5@1280x1024 | N/A | Auto |
| TINYCMOS05000CB | 5.0M/SC5033(C)<br>1/2.7“ (5.18x3.89) | 2.0x2.0 | 2.0V/lux-sec<br>64dB<br>35dB | 20@2592x1944<br>20@2048x1536<br>20@1600x1200<br>30@800x600 | N/A | Auto |
| TINYCMOS03000CA | 3.0M/Aptina(C)<br>1/2.7“ (4.51x3.38) | 2.2x2.2 | NA | 3@2048x1536<br>5@1600x1200<br>7.5@1280x1024 | N/A | Auto |
| TINYCMOS03000CB | 3.0M/SmartSens(C)<br>1/3“ (4.10x3.07)) | 2.0x2.0 | 2.0V/lux-sec<br>64dB<br>35dB | 20@2048x1536<br>20@1600x1200<br>30@800x600 | N/A | Auto |
| TINYCMOS02000CA | 2.0M/Aptina(C)<br>1/3.2“ (4.48x3.36) | 2.8x2.8 | NA | 5@1600x1200<br>7.5@1280x1024<br>20@800x600<br>22@640x480 | N/A | Auto |
| TINYCMOS02000CB | 2.0M/OV2710(C)<br>1/2.7”(5.76x3.24) | 3x3 | 3.3V/ Lux-sec<br>69dB<br>39dB | 25@1920x1080<br>30@1280x1024<br>30@1280x720 | N/A | Auto |
| TINYCMOS00920CA | 0.92M/BG0703(C)<br>1/2.7” (5.80x3.28) | 4.5x4.5 | 5.8V/ Lux-sec<br>65dB<br>43dB | 25@1280x720<br>25@640x480 | N/A | Auto |
| TINYCMOS00350CA | 0.35M/Aptina(C)<br>1/4“ (3.58x2.69) | 5.6x5.6 | NA | 30@640x480 | N/A | Auto |

| Software Environment Under Lan/wan/usb Video Output | |
|---|---|
| Spectral Range | 380-650nm (with IR-cut Filter) |
| White Balance | Auto/ROI/Manual White Balance |
| Color 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 |
| Data Format | MJPEG |
| Cooling System* | Natural |
| Operating System | Microsoft® Windows® XP / Vista / 7 / 8 / 8.1 /10(32 & 64 bit), OSx(Mac OS X), LINUX |
| PC Requirements | CPU: Equal to Intel Core2 2.8GHz or Higher, Memory: 4GB or More, Ethernet Port: RJ45 Ethernet Port, Display:19” or Larger, CD-ROM |

| 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 |

**LABLINK INSTRUMENTS**

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

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