# MICAPS
# E3CMOS20000CA

## C-mount USB 3.0 CMOS Cameras
## Aptina/Panasonic CMOS Sensor

The E3CMOS20000CA is a high-performance USB 3.0 camera featuring either an OnSemi or Panasonic CMOS sensor for fast, detailed image capture. It supports 20MP resolution and comes in a compact CNC aluminum alloy body. With its advanced 12-bit Super-fine™ Hardware Image Signal Processor (HISP VP), it handles tasks like demosaicing, auto exposure, gain and white balance adjustments, color correction, gamma, contrast, and more—offloading processing from the PC and significantly improving speed. It comes with the powerful MicroView software for video and image processing and supports Windows, Linux, macOS, and Android. SDKs are available in C/C++, C#/VB.NET, Python, Java, DirectShow, Twain, and more. Ideal for well-lit environments and microscope image capture, the E3CMOS20000CA camera ensures smooth performance and higher frame rates.

### Features

- Standard C-Mount Camera with Aptina or Panasonic CMOS sensor
- CNC aluminum alloy housing
- With hardware resolution 20M
- Super-fineTM HISP VP and USB3.0 5 Gbps interface ensuring high frame rates
- USB3.0 5Gbps interface ensuring high speed data transmission
- Super-Fine color engine with perfect color reproduction capability
- With advanced video & image processing application MicroView

### Applications

- 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)
- Scientific research, education (teaching, demonstration and academic exchanges)

| Model No. | Sensor & Size(mm) | Pixel(μm) | G Sensitivity Dark Signal SNRMAX | FPS/Resolution | Binning | Exposure |
|---|---|---|---|---|---|---|
| E3CMOS20000CA | 20M/AR2020[C] 1/1.8"(7.17x5.38) | 1.4x1.4 | 8.4 ke-/lux.sec | 20@5120x3840 45@2560x1920 | 1x1 2x2 | 0.2ms~15s |

C: Color
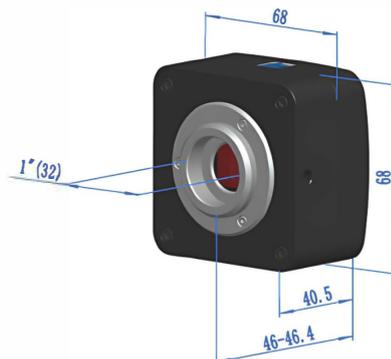
### Other Hardware Configuration

| | |
|---|---|
| Spectral Range | 380-650nm (with IR-cut Filter) |
| White Balance | ROI White Balance/ Manual Tint Adjustment/NA for Monochromatic Sensor |
| Color Technique | Super Fine HISP VP /NA for Monochromatic Sensor |
| Capture/Control SDK | Windows/Linux/macOS/Android Multiple Platform SDK(Native C/C++, C#/VB.NET, Python, Java, DirectShow, Twain, etc) |
| ADC | 8 Bit / 12 Bit |
| Recording System | Still Picture and Movie |
| Cooling System* | Natural |

### 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: USB3.0 High-speed Port |
| | Display: 17" or Larger |
| | CD-ROM |