## RAYSCOPE



Inverted Biological Microscope with its excellent optical capability. wide application, firm body frame and skillful figure design, meet the demands of biology, microbiology, histology, immunology etc.

This inverted biological microscope provides excellent functions High resolution and contrast long working distance objectives provides high quality image. High contrast Phase contrast objectives make the figure and configuration of the cells more clear. The long working distance condenser can contain higher vessels or samples.

## MICROSCOPE SPECIFICATION

| Optical System | Universal Infinite Optical System. |
| :---: | :---: |
| Stand | Universal single cast stand with Anti mold paint. |
| Viewing Head | Compensation Free Trinocular Head .Inclined at $45^{\circ}$ ( $50 \mathrm{~mm}-75 \mathrm{~mm}$ ). Light distribution ratio 0:100 or 100:0. |
| Eyepieces | WF10X/ 22mm, Anti-fungal and Anti reflection treated. |
| Nosepiece: | Quadruple revolving nose-piece with precise click stops, optional quintuple nose-piece. |
| Mechanical stage | Double layers mechanical stage, Stage size: 242 mmx 172 mm , Central stage: $\Phi 110 \mathrm{~mm}$, Moving range: $75 \mathrm{~mm} \times 50 \mathrm{~mm}$ |
| Objectives | Long working distance Infinite plan- objective LWDPL 4X/o.1W.D. 25 mm , LWDPL $10 \mathrm{X} / \mathrm{o} .25$ phase contrast W.D 12 mm , LWDPL20X/O. 4 phase contrast W.D. 10mm, LWDPL40X/O.5W.D. 7 mm . |
| Condenser | N.A o.3Abbe condenser W.D 0.75 mm \& Center of phase contrast ring plate adjustable with centering telescopic eye-piece. |
| Focusing | Tension adjustable Coaxial coarse \& fine focusing adjustment with rack and pinion mechanism Fine focusing scale value 0.002 mm |
| Filters | Blue, green, yellow and frosted glass |
| Holders | Glass slide holder,Terassaki Holder and Petridish Holder. |
| Illumination | 6 W LED illumination with Adjustable brightness, Optional Halogen 12V/30W light source |
| Optional Accessories | Eyepiece WF15X/17mm,WF20X/12.5mm, infinity plan objective 20Xo.40,60X/0.85, Infinite 40x phase objective Infinity plan objective 4Xo.10, 10X/0.25, 20X/0.40, 40X/0.65, 60X/0.85, 100X/1.25 Oil, Photography attachment and CCD C-mount 0.5x \& 0.75X, 1.3Meg, 2.0Mega, 3.0Mega, 5.0 Mega, 10.0MegaPixel CMOS Digital Mega, 10.0MegaPixel CMOS Digital camera eyepiece, HDMI 1080 and HDMI720p cameras, Image analysis software, Mercury type Fluorescent Attachment Blue, Green, Ultra Viol et and Violet filters |
| Upgradeability | Can be upgradeable to fluorescence microscopy with 100 W reflected fluorescence illumination or LED fluorescence illuminationwith UV, Blue and Greeen excitation compatible for using dyes DAPI/Hoechst/GFP/Alexa Fluor,488/GFP/FITC and Rhodamine/TRITC. |
| Certifications | ISO 9001:2015, ISO 13485:2016, European CE and Us FDA |
| Warranty | Standard warranty 1 years against any manufacturing defect. |



RYS CAM1080PHB/PHD/PHE HDMI+WiFi+SD Card All in 1 CMOS Camera
RYS CAM1080PHB/PHD/PHE is a multiple interfaces (HDMI+WiFi+SD card, so $X$ here means multiple interfaces) CMOS camera and it adopts ultra-high performance Sony CMOS sensor as the image-picking device. HDMI + WiFi are used as the data transfer interface to HDMI display or computer.

For HDMI output, The IOXCAMView will be loaded and a camera control panel and toolbar are overlaid on the HDMI screen, in this case, the USB mouse can be used to set the camera, browse and compare the captured image, play the video.

For WiFi output, unplug the mouse and plug in the USB WiFi adapter, connect the computer WiFi to the camera, then the video stream can be transfer to computer with the advanced software iView. With Iview, you can control the camera; process the image as other USB series camera.

## RAYSCOPE

| Order Code | Sensor \& Size(mm) | Pixel ( $\mu \mathrm{m}$ ) | G Sensitivity Dark Signal | FPS/Resolution |  | Binning | Exposur |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| RYS CAM1080PHB XP1080B | 1080P/5M/ <br> Sony IMX178(C) <br> 1/1.8"(6.22x4.67) | $2.4 \times 2.4$ | 425 mv with $1 / 30$ s <br> 0.15 mv with $1 / 30 \mathrm{~s}$ | $\begin{aligned} & \text { 60@1920×1080 } \\ & \text { 30@1920×1080 } \\ & \text { (HDMI) } \end{aligned}$ | $\begin{aligned} & \text { 25@1920x1080 } \\ & \text { (WiFi) } \end{aligned}$ | 1x1 | 1ms~ 918 ms |
| RYSCAM1080PHD XP1080D | 1080P/2M/ <br> Sony IMX185(C) <br> 1/1.9"(7.20x4.05) | $3.75 \times 3.75$ | 1120 mv with $1 / 30$ s 0.15 mv with $1 / 30 \mathrm{~s}$ | $\begin{aligned} & \text { 30@1920×1080 } \\ & \text { (HDMI) } \\ & \text { 25@1920×1080 } \\ & \text { (WiFi) } \end{aligned}$ |  | 1x1 | $\begin{aligned} & 0.06 \mathrm{~ms} \sim \\ & 918 \mathrm{~ms} \end{aligned}$ |
| RYSCAM1080PHE <br> XP1080E | 1080P/2M/ <br> Sony IMX249(C,GS) <br> 1/1.2"(11.25x6.33) | $5.86 \times 5.86$ | 1016 mv with $1 / 30 \mathrm{~s}$ <br> 0.15 mv with $1 / 30 \mathrm{~s}$ | $\begin{aligned} & 30 @ 1920 \times 1080 \\ & \text { (HDMI) } \\ & 25 @ 1920 \times 1080 \\ & \text { (WiFi) } \end{aligned}$ |  | 1x1 | $\begin{aligned} & 0.043 \mathrm{~ms} \\ & \sim 1000 \mathrm{~m} \\ & \mathrm{~s} \end{aligned}$ |

GS: Global Shutter, C:Color



## Potiential Application

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);

RYSCAM01080PHB/PHD/PHE C-mount HDMI+WiFi CMOS Camera Dimension

Installation drawings(Click to enlarge). The RYSCAM01080PHB//RYSCAM1080PHD HDMI CMOS camera body, made from tough, 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. These measures ensure a rugged, robust solution with an increased lifespan when compared to other industrial camera solutions.


Dimension for RYSCAM1080PHB//RYSCAM1080PHD/RYSCAM1080PHE C-mount HDMI CMOS Camera

