

Touptek Microscope-Camera XCAM-1080PHA

HDMI + USB 2.0 + SD-Card Data Transfer

XCAM1080PHA is a multiple interfaces (HDMI+USB2.0+SD card, so X here means multiple interfaces) CMOS camera and it adopts ultra-high performance Aptina CMOS sensor as the image-picking device. HDMI+USB2.0 are used as the data transfer interface to HDMI display or computer.

For HDMI output, the XCamView 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 etc.

For USB2.0 output, unplug the mouse and plug in the USB2.0 cable to the camera and computer, then the videostream can be transfer to computer with the advanced software ToupView. With ToupView, you can control the camera, process the image as ToupTek's other USB series camera.

The basic characteristics of XCAM-1080PHA are as follows:

- All in 1(HDMI+USB+SD card) C-mount camera with Aptina high sensitivity CMOS sensor;
- Simultaneous HDMI & USB output;
- CNC precision machining shell;
- Built-in mouse control;
- Built-in image capture & video record to SD card;
- Built-in camera control panel, including exposure (manual/auto) /gain, white balance(lockable), color adjustment, sharpness and denoising control;
- Built-in toolbar including zoom, mirror, comparison, freeze, cross, browser functions;
- Built-in image & video browsing, display& play;
- Ultra-Fine color engine with perfect color reproduction capability(USB);
- With advanced video & image processing applicationToupView, which including professional image processing such as 2D measurement, HDR, image stitching, EDF(Extended Depth ofFocus), image segmentation & count, image stacking, color composite and denoising(USB);
- Support standard UVC for Windows/Linux/Mac(USB);

The possible application of XCAM1080PHA is as follows:

- 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 Dark Signal	FPS/Resolution	Binning	Exposure
XCAM1080PHA XP1080A	1080P/Sony IMX236 1/2.8"(5.38x3.02)	2.8x2.8	510 mv with 1/30s 0.15 mv with 1/30s	30@1920*1080P(HDMI) 30@1920*1080(USB)	1x1	0.1ms~999ms
XCAM1080P8MPA XP1080B	Sony IMX334(C) 1/1.8"(7.68x4.32)	2.0x2.0	505mv with 1/30s 0.13mv with 1/30s	60@1920*1080(HDMI) 30@3840*2160(USB)	1x1	0.04~2000

C: Color; M: Monochrome;

Interface & Button Functions



USB	USB Camera or USB Mouse
HDMI	HDMI Output
DC12V	12V Power in
SD	SD Card Slot
ON/OFF	Power On/off Switch

Other Specification for HDMI Output

UI Operation	With USB Mouse	
Image Capture	HDMI	1080P/8M/15M Resolution, JPEG or TIFF Format in SD Card(8G or above)
	USB	1080P/8M/15M Resolution in Computer
Video Record	HDMI	XCAM1080PHA: 30fps@1080P (avi) in SD Card(8G) XCAM1080P8MPA: 60fps/1920*1080 (mp4) in SD Card(8G or above)
	USB	XCAM1080PHA: 30fps@1080P (avi) in Computer XCAM1080P8MPA: 30fps/3840*2160 (mp4) in Computer
Camera Control Panel	Including Exposure, Gain, White Balance, Color Adjustment, Sharpness and Denoising Control	
Toolbar	Including Zoom, Mirror, Comparison, Freeze, Cross, Browser Function	

Other Specification for USB Output

White Balance	Auto White Balance
Color Technique	Ultra-Fine™ Color Engine (USB)
Capture/Control SDK	Standard UVC for Windows/Linux/macOS(USB)
Recording System	Still Picture or Movie (USB)

Software Environment (for USB2.0 Connection)

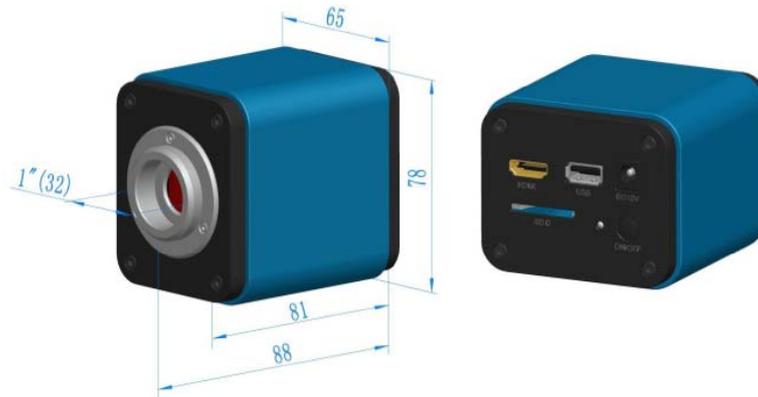
Operating System	Microsoft® Windows® XP / Vista / 7 / 8 / 8.1 / 10(32 & 64 bit) OSx(Mac OS X) Linux
PC Requirements	CPU: Equal to Intel Core2 2.8GHz or Higher
	Memory:4GB or More
	USB Port:USB2.0 High-speed Port
	Display:19" or Larger
	CD-ROM

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 12V/1A Adapter

Dimension of XCAM-1080PHA

The XCAM body, made from tough, zinc 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..



Product Images



XCAM back panel



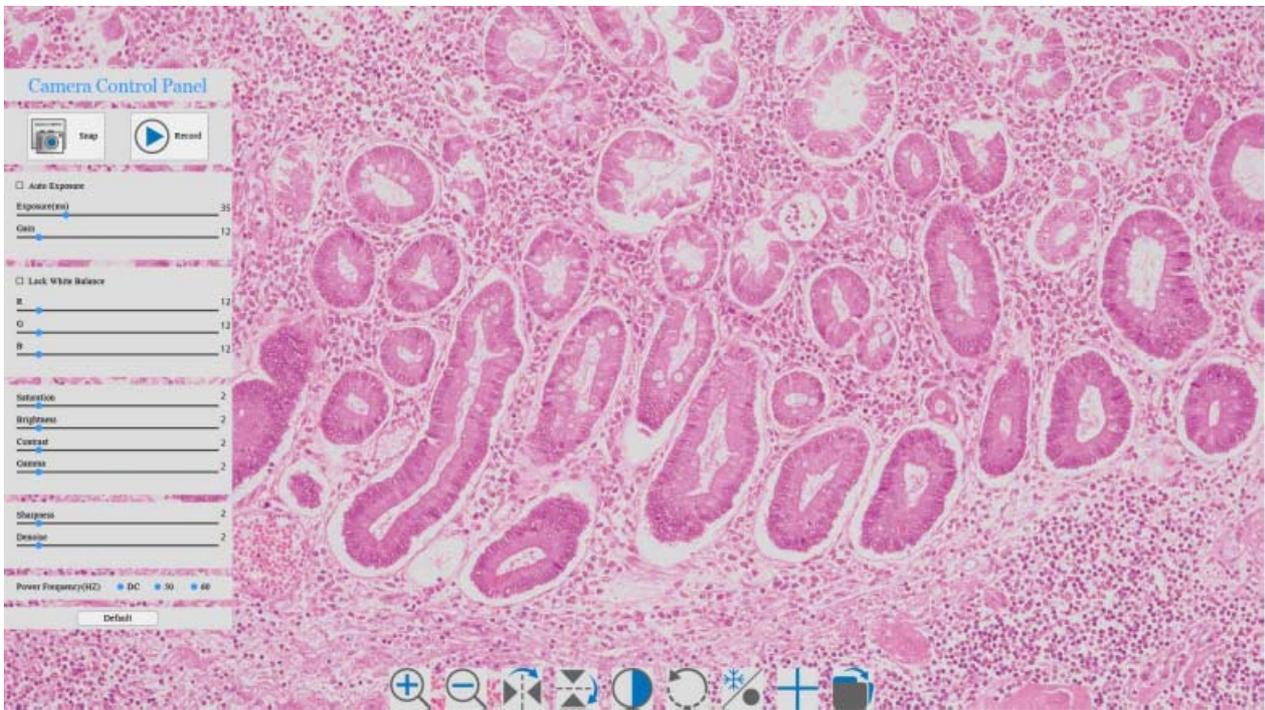
XCAM side views



XCAM1080PHA and Microscope



XCAM + Microscope + Display



XCAM UI view for mouse control

Packing Information of XCAM-1080PHA



Standard Packing List			
A	Gift box : L:25.5cm W:17.0cm H:19.0cm (1pcs, 1.55kg/ box)		
B	XCAM1080P HA/8MPA camera		
	Power Adapter: Input: AC 100~240V 50Hz/60Hz, Output: DC 12V 1A American standard: Model: GS12U12-P11 12W/12V/1A; UL/CUL/BSMI/CB/FCC EMI Standard:EN55022,EN61204-3, EN61000-3-2,-3, FCC Part 152 class B, BSMI CNS14338		
C	EMS Standard:EN61000-4-2,3,4,5,6,8,11,EN61204-3,Class A Light Industry Standard European standard: Model:GS12E12-P11 12W/12V/1A; TUV(GS)/CB/CE/ROHS EMI Standard:EN55022,EN61204-3, EN61000-3-2,-3, FCC Part 152 class B, BSMI CNS14338 EMS Standard:EN61000-4-2,3,4,5,6,8,11,EN61204-3,Class A Light Industry Standard		
D	HDMI cable		
E	USB mouse		
F	High-speed USB2.0 A male to A male gold-plated connectors cable /2.0m		
G	CD (Driver & utilities software, Ø12cm)		
Optional Accessory			
H	Adjustable lens adapter	C-Mount to Dia.23.2mm eyepiece tube (Please choose 1 of them for your microscope)	108001/AMA037 108002/AMA050 108003/AMA075
		C-Mount to Dia.31.75mm eyepiece tube (Please choose 1 of them for your telescope)	108008/ATA037 108009/ATA050 108010/ATA075
I	Fixed lens adapter	C-Mount to Dia.23.2mm eyepiece tube (Please choose 1 of them for your microscope)	108005/FMA037 108006/FMA050 108007/FMA075
		C-Mount to Dia.31.75mm eyepiece tube (Please choose 1 of them for your telescope)	108011/FTA037 108012/FTA050 108013/FTA075
Note: For H and I optional items, please specify your camera type(C-mount, microscope camera or telescope camera), ToupTek engineer will help you to determine the right microscope or telescope camera adapter for your application;			
J	108015(Dia.23.2mm to 30.0mm Ring)/Adapter rings for 30mm eyepiece tube		
K	108016(Dia.23.2mm to 30.5mm Ring)/ Adapter rings for 30.5mm eyepiece tube		
L	Calibration kit	106011/TS-M1(X=0.01mm/100Div.); 106012/TS-M2(X,Y=0.01mm/100Div.); 106013/TS-M7(X=0.01mm/100Div., 0.10mm/100Div.)	
M	SD card(4G or 8G)		

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