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## XFCAMTOP4K8MPA HDMI/WLAN/USB Outputs Auto-Focus C-mount CMOS Camera

Sony Exmor/STARVIS back-illuminated CMOS sensor

4K HDMI/ WLAN/ USB multiple video outputs C-mount camera

4K/1080P auto switching according to monitor resolution

SD card/USB flash drive for captured image and video storage, support local preview and playback

Auto/Manual focus with the movement of the sensor

Embedded XCamView for the control of the camera and image processing

Excellent ISP with local tone mapping and 3D denoising

ToupView/ToupLite software for PC

iOS/Android applications for smart phones or tablets



### Specification

## XFCAMTOP4K8MPA HDMI/WLAN/USB Multi-outputs Auto-Focus C-mount CMOS Camera(1)

The XFCAMTOP4K8MPA is a camera designed by ToupTek that includes multiple modes of output (HDMI/WLAN/USB), where X in 'XFCAM' means a CMOS camera with multiple interfaces, and F means auto focus. It uses ultra-high-performance CMOS sensor. The camera can be directly connected to an HDMI display, or it can be connected to a computer via WiFi or USB, and the image and video can be saved in an SD card /USB flash drive for on-site analysis and subsequent research.

Enhanced with an embedded ARM core, this camera integrates various functions inside. With the help of a USB mouse and well-designed UI on the HDMI monitor, all functions could be easily controlled.

The XFCAMTOP4K8MPA camera comes with the built-in Auto Focus system, which can realize Auto Focus on specific areas of the sample.

By inserting a WLAN module or connecting to a computer via a USB cable, the user can directly control the camera's hardware with the software ToupView or ToupLite. The XFCAMTOP4K8MPA camera can be used for tool field inspection, microscope observation, etc.

The XFCAMTOP4K8MPA camera is intended to be used for the acquisition of digital images from the stereo microscope, biological microscope or online interactive teaching.

Order Code	Sensor & Size(mm)	Pixel(μm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure
XFCAMTOP4K8MPA	4K/Sony IMX334(C)	2.0x2.0	505 mv with 1/30s	30@3840x2160(HDMI)	1x1	0.04ms~1000ms

1/1.8"(7.68x4.32)

0.13 mv with 1/30s

30@3840x2160(WLAN)

30@3840x2160(USB)



Interface or Button	Function Description
USB Mouse	Connect USB mouse for easy operation with embedded XCamView software
USB2.0	Connect USB flash drive to save pictures and videos
USB Video	Connect 5G WLAN module to transfer video wirelessly in real time
HDMI	Connect PC or other host device to realize video image transmission
ON/OFF	Power switch
SD	Comply with SDIO3.0 standard and SD card could be inserted for video and images saving
LED	LED status indicator
DC12V	Power adapter connection (12V/1A)
Video Output Interface	Function Description
HDMI Interface	Comply with HDMI1.4 standard 30fps@4K or 30fps@1080P
WLAN Interface	Connecting 5G WLAN adapter (USB2.0 slot) in AP/STA mode
USB Video Interface	Connecting USB Video port of PC for video transfer MJPEG format video
Other Function	Function Description
Video Saving	Video format: 8M(3840*2160) H264/H265 encoded MP4 file Video saving frame rate:30fps in SD card or USB flash drive
Image Capture	8M (3840*2160) JPEG/TIFF image in SD card or USB flash drive
Measurement Saving	Measurement information saved in different layer with image content Measurement information is saved together with image content in burn in mode
ISP	Exposure(Automatic / Manual Exposure) / Gain, White Balance(Manual / Automatic / ROI Mode), Sharpening, 3D Denoise, Saturation Adjustment, Contrast Adjustment, Brightness Adjustment, Gamma Adjustment, Color to Gray, 50HZ/60HZ Anti-flicker Function
Video/Image Operation	Zoom In/Zoom Out(Up to 10X), Mirror/Flip, Color/Gray, Freeze, Cross Line, Overlay , Auto Focus, Compare(Comparison between real time video and images in SD card/ USB flash drive ), Embedded Files Browser, Video Playback, Measurement Function
Embedded RTC(Optional)	To support accurate time on board
Restore Factory Settings	Restore camera parameters to its factory status
Multiple Language Support	English / Simplified Chinese / Traditional Chinese / Korean / Thailand / French / German / Japanese / Italian / Russian
Software Environment under LAN/WLAN/USB Video Output	
White Balance	Auto White Balance
Color Technique	Ultra-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 or Movie
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

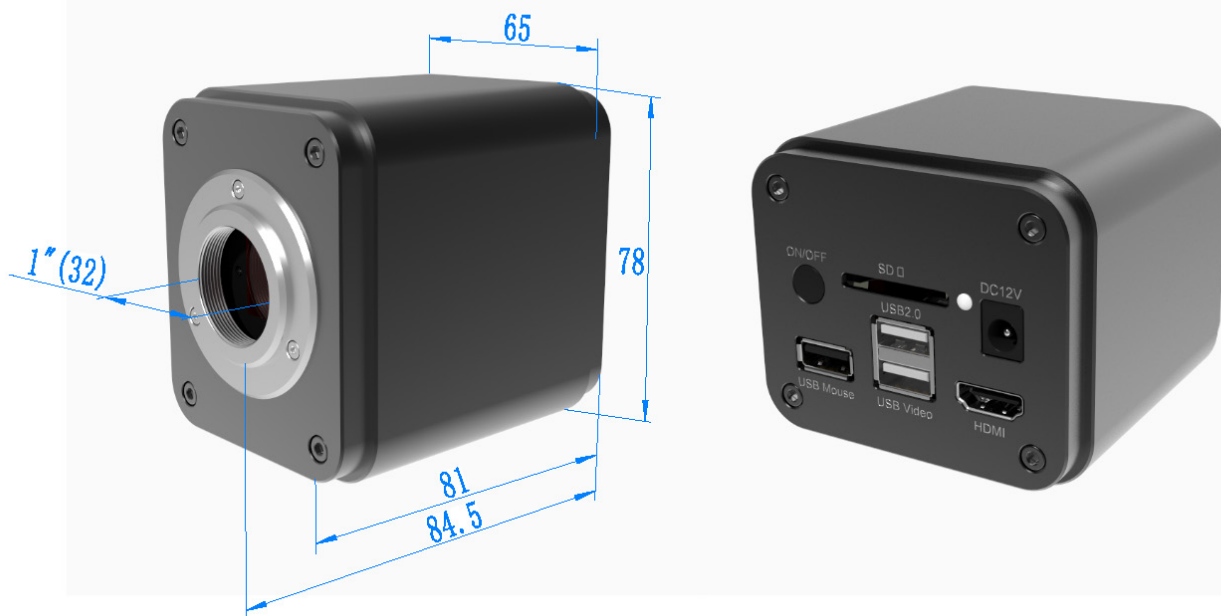
Operating Temperature (in Centidegree)	-10 ° ~ 50 °
Storage Temperature (in Centidegree)	-20 ° ~ 60 °
Operating Humidity	30~80%RH
Storage Humidity	10~60%RH

## Potential 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);

## Dimension of XFCAMTOP4K8MPA Series

Installation drawings(Click to enlarge). The XFCAMTOP4K8MPA series camera body, made from tough, CNC 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. This design ensures a rugged, robust solution with an increased lifespan when compared to other industrial camera solutions.



Dimension for XFCAMTOP4K8MPA Series

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