

HDMI Cameras

VL-CHU1080PX Output Camera

Dual-interface multi-scenario microscopic imaging tool

- Dual-interface collaborative output
- Professional imaging performance
- User-friendly operation design
- Flexible storage and compatibility
- Industrial-grade reliability



One Platform Many Possibilities

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Overview

Introduction to VL-CHU1080PX Output Camera

VL-CHU1080PX Output Camera is a multi-interface C-mount CMOS camera launched by VenusLab. It is equipped with high-performance CMOS sensors such as Sony IMX385, IMX334 (discontinued), and IMX415. Its resolution ranges from 2 million to 8 million pixels, and it supports synchronous output through dual HDMI and USB interfaces. The HDMI interface is compatible with the HDMI 1.4 standard, enabling high-definition video output at up to 60fps@1080P. Combined with the built-in XCamView software, operations such as exposure, white balance, and image measurement can be completed using a USB mouse. The USB interface supports the UVC standard. The camera is equipped with an SD card slot and a USB interface, supporting local storage and preview of images (in JPEG/TIFF formats) and videos (in MP4 format with H264/H265 encoding). It adopts a CNC precision-machined housing and has a wide operating temperature range of -10~50 . It can be widely adapted to biological microscopes and stereomicroscopes, meeting the needs of scenarios such as scientific research observation, industrial inspection, and digital teaching.

Features:

- C interface design, equipped with a high-sensitivity CMOS sensor
- Supports simultaneous output of HDMI + USB dual interfaces
- Embedded XCamView software (including mouse control panel, zoom/mirror/crosshair and other toolbars)
- Built-in SD card image capture, video recording and browsing/playing functions
- Equipped with Ultra-Fine color engine to ensure accurate colors
- CNC shell is formed in one piece, with a durable structure

Dimension:



Specifications

Common Parameter Specification Table

Interface	Function Description
USB Mouse	Connect USB mouse for easy operation with embedded XCamView software;
USB Video	Connect PC or other host device to realize video output transmission;
HDMI	Comply with HDMI1.4 standard. 1080P format video output for standard displayer;
USB	Connect USB flash drive for capturing video and image storage;
SD	Comply with SD3.0 standard and SD card could be inserted for video and images storage;
LED	LED status indicator;
DC12V	Power adapter connection (12V/1A);
ON/OFF	Power switch;
Video Output Interface	Function Description
HDMI Interface	Comply with HDMI1.4 standard; 60fps@1080P;
USB Video Interface	Connecting USB port of PC for video transfer; MPEG4 format video;
Function Name	Function Description
Video Saving	Video format: 1920*1080 H.264/H.265 encoded MP4; Video saving frame rate: 60fps (XCAM1080MP4/XCAM1080MP4 (Suspended)); 30fps(XCAM1080PMP4)
Image Capture	2M (1920*2160, XCAM1080P2MPA) JPEG/TIFF image in SD card ;8M (3840*2160, XCAM1080P8MPA/XCAM1080P8MPB) JPEG/TIFF image in SD card ;
Measurement Saving	Measurement information saved in layer mode with image content; Measurement information is saved together with image content in burn in mode.
ISP Function	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
Image Operations	Zoom In/Zoom Out, Mirror/Flip, Freeze, Cross Line, Overlay, 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 / Thai / French / German / Japanese / Italian / Russian
Software Environment under 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	MiMicrosoft® 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 12V/1A Adapter

Packing List

Packing Information for VL-CHU1080PX Series



Standard Packing List			
A	Gift box: L:25.5cm W:17.0cm H:9.0cm (1pcs,1.47kg/ box)		
B	One VL-CHU1080PX series camera		
C	Power Adapter: Input: AC 100~240V 50Hz/60Hz, Output: DC 12V 1A European standard: Model: GS12E12-P1I 12W/12V/1A; TUV(GS)/CB/CE/ROHS American standard: Model: GS12U12-P1I 12W /12V/1A: UL/CUL/BSMI/CB/FCCEMI 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	USB Mouse		
E	HDMI cable		
F	USB2.0 A male to A male gold - plated connectors cable / 2.0m		
G	CD (Driver & utilities software, Ø12cm)		
Optional Accessory			
H	SD card(16G or above; Speed: class 10)		
I	Adjustable lens adapter	C-Mount to Dia.23.2mm eyepiece tube(Please choose 1 of them for your microscope)	108001/AMA037108002/ AMA050108003/AMA075
J	Fixed lens adapter	C-Mount to Dia.23.2mm eyepiece tube(Please choose 1 of them for your microscope)	108005/FMA037108006/ FMA050108007/FMA075
	Note:For K and L 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.		
K	108015(Dia.23.2mm to 30.0mm ring)/Adapter rings for 30mm eyepiece tube		
L	108016(Dia.23.2mm to 30.5mm ring)/ Adapter rings for 30.5mm eyepiece tube		
M	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.)	

Service & Support

We are dedicated to delivering exceptional optoelectronic solutions to every client. From precision manufacturing and secure delivery to full-lifecycle technical support, we are here to ensure a seamless and reliable experience at every step.

1. Warranty Policy

Quality First, Worry-Free Operation

Warranty Period: We offer a **two-year** warranty service for all of our core optoelectronic products, effective from the date of shipment.

Coverage: We provide free repair or replacement services for malfunctions caused by material defects or workmanship errors under normal operating conditions.

Rapid Response: Upon receiving a warranty claim, we guarantee to initiate the assessment process within **24 hours** to minimize your equipment downtime.

2. Technical Support

Expert Team, Full-Process Guidance

Technical Consultation: Our team of senior optical engineers provides **24/7 online support** to assist with installation, commissioning, optical path alignment, and parameter optimization.

Scheduled Maintenance: We offer full-lifecycle maintenance recommendations, including firmware upgrades, optical component cleaning guidelines, and precision calibration services.

Training Services: We provide customized remote or on-site operational and safety training to ensure your team can operate the equipment efficiently and safely.

3. Logistics & Delivery

Precision Packaging, Global Reach

Professional Packaging: Given the fragile nature of optical instruments, we utilize industrial-grade shockproof, anti-static, and moisture-proof vacuum packaging to ensure zero damage during transit.

Logistics Partners: We partner with top-tier global logistics providers (**DHL / FedEx / UPS / SF Express**) to offer reliable shipping with real-time tracking.

Shipping Insurance: All shipments are fully insured to eliminate logistics risks.

4. Compliance & Certification


Strict Standards, Total Compliance

Quality Certification: Our manufacturing process is **ISO 9001 certified**, and our products comply with international standards such as **CE** and **RoHS**.

Export Compliance: "Committed to environmental responsibility, all our products comply with **RoHS 2.0** and **REACH** standards, ensuring safety and global compliance."

Explore Series

VL-1080P2MPA	3.75x3.75	1175mv with 1/30s 0.15mv with 1/30s	0.04 - 1000ms	60@1920x1080 (HDMI) 50@1920x1080 (USB)	Sony IMX385(C) 1/2.7" (2.02x3.04)	1x1
VL-1080P8MPB	1.45x1.45	9.1mv with 1/30s 0.3mv with 1/30s	0.04 - 1000ms	30@3840x2160 (HDMI) 30@3840x2160 (USB)	Sony IMX575(C) 1/2.5" (4.7x3.52)	1x1

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