# VENUSLAB
## OPTOELECTRONICS

# HDMI Cameras
## VL-CHU1080PX Output Camera

**Multi-scenario microscopic imaging tool with dual-interface convenient output device**

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



## One Platform Many Possibilities

Contact Us sales@venuslabtech.com

## 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 1AEuropean standard: Model: GS12E12-P1I 12W/12V/1A; TUV(GS)/CB/CE/ROHSAmerican 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 CNS14338EMS 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.) |

## Explore Series

| | | | | | | |
|---|---|---|---|---|---|---|
| VL-1080P2MPA | 3.75×3.75 | 1175mv with 1/30s 0.15mv with 1/30s | 0.04 - 1000ms | 60@1920×1080 (HDMI) 50@1920×1080 (USB) | Sony IMX385(C) 1/2.7" (2.02×3.04) | 1×1 |
| VL-1080P8MPB | 1.45×1.45 | 9.1mv with 1/30s 0.3mv with 1/30s | 0.04 - 1000ms | 30@3840×2160 (HDMI) 30@3840×2160 (USB) | Sony IMX575(C) 1/2.5" (4.7×3.52) | 1×1 |

📩 Get in touch with our team to explore configurations,request a quote,or learn more about customized solutions tailored to your needs.

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