TrueChrome 4K Pro HDMI Microscope Camera, 3840 × 2160 at 30 fps, USB 3.0

Model TrueChrome 4K Pro · waveqvanta.com/products/truechrome-4k-pro-microscope-camera

A 4K microscope camera that works stand-alone on an HDMI monitor or with a PC over USB 3.0 or LAN.



The TrueChrome 4K Pro captures 3840 × 2160 images and records 4K video at 30 fps directly to an HDMI display, so microscopy work can be captured, measured and saved without a PC. It also offers live stitching and extended depth of field (EDF), and connects to a computer over USB 3.0 or LAN when needed.

Key features

- 3840 × 2160 (8 MP) Sony color CMOS sensor, 13.33 mm (1/1.2") diagonal, 2.9 µm pixels
- Image signal processor handles 4K data at up to 30 fps, setting exposure in complex lighting and rendering difficult colors such as blue, purple and pink
- PC-free operation on an HDMI monitor: preview, capture and 4K video recording at 30 fps, with SD card storage
- Live stitching builds large panoramic images within seconds while the stage is moved
- Live EDF merges different focal planes into one extended-depth-of-field image as the focus is turned
- Frame rates: 30 fps via HDMI, 25 fps via USB 3.0, 30 fps via LAN
- Color temperature adjustable from 1800 to 10000 K; up to four cameras via SDK

Specifications

Sensor Type	Sony CMOS
Color / Mono	Color
Resolution	3840 × 2160 (8 MP)
Preview / Capture (HDMI)	1920 × 1080 or 3840 × 2160
Pixel Size	2.9 µm × 2.9 µm
Effective Area	11.1 mm × 6.3 mm
Array Diagonal	13.33 mm (1/1.2")
Frame Rate (HDMI)	30 fps
Frame Rate (USB 3.0)	25 fps
Frame Rate (LAN)	30 fps
Video Recording	30 fps @ 3840 × 2160
Shutter Type	Rolling
Exposure Time	1 ms – 10 s
Color Temperature	1800–10000 K
Data Interface	HDMI, USB 3.0, USB 2.0, LAN
Storage	SD card (FAT32)
Image Format	HDMI: JPG, TIF; USB and LAN: JPG, PNG, TIF, DICOM
Optical Interface	C-mount
Power Consumption	2.4 W
Dimensions	105.7 mm (H) × 78 mm (W) × 70.8 mm (L)

Weight	505 g
Operating Environment	−10 to 45 °C, 10–85% RH
Multi-Camera	Up to 4 cameras simultaneously via SDK
Software / SDK Support	HDMI: embedded software; PC: acquisition and analysis software
Operating System	Windows 10 (64-bit), Mac
PC Requirements	Intel Core i5 quad-core or above, 8 GB RAM or more

Typical applications

- Biological microscopy (e.g. epiphyseal plate sections)
- Fluorescence microscopy
- Metallographic microscopy
- Polarizing microscopy