



Forensic Comparison Trinocular Microscope

with Image Analysis System
& Work Station

WFM-30





Technical Specification

No.	Item	Parameter
1	Main Function	Magnify objective via the same eyepiece group, at the same time, observe photos from both side, left and right of the objective field, by jointing, overlapping, we can compare and identify the minor differences, like the bullet mark, tools mark and stamp and so on, 0.5x C mount Photo adopter for Cannon SLR,
2	Nosepiece	6 hole (Sextuple nosepiece).
3	Magnifying power	3X-153X
4	Eyeiece	WF10X/23mm , WF20X/12.5mm
5	Changing Objective	LWD Infinity Plan Objective 0.5X , 1.0X , 1.5X , 2X , 4X, 6X,
6	Working distance	115mm
7	Objective Field	φ2.0mm-φ90mm, additional 0.4X Objective , 1.6x Barlow
8	Stage Dimension	115mm×115mm movement scale, horizontal 54mm, vertical 54mm, perpendicular 4mm, horizontal continuous movement: 54mm, synchronous rising-lowering scale 54mm
9	Observation Method	Coaxial Light, Polarizing Light, UV Light.
10	Optical Source	Air cooling power supply, super power 5W LED light, lightness and spot can adjustable
11	Power Supply	80-240V AC in, 12V DC out, GB standard
12	Photography	Prefix camera (Optional)
13	Video	300W HD Digital CCD, 3.0M CCD, effective resolution 2048x1536, USB2.0 (Optional).
14	Filters	Red, yellow, Blue, Green.



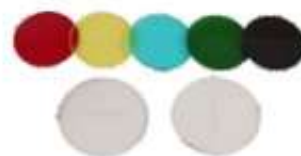
Coaxial Light Device



Auxiliary Lens



Polarized Light Device



Mag. Correcting and Ultraviolet rays piece, Filters



Digital Microscope Camera

> Innovative technology, the USB2.0 frame rate is greatly improved whilst maintaining the fidelity of the original image output.

> Simple and economical microscopy imaging.



Model	ACVT-32A 12M
Sensor Type	Sony CMOS
Sensor Size	1/2.33"
Resolution	12MP, 4000x3000
Pixel Size	1.34µm x 1.34µm
Frame	15fps
Color/Mono	Color
Shutter Mode	Rolling
Exposure Mode	Auto/Manual
Picture Format	TIFF/JPG/PNG/DICOM
Operating System	Windows 7/8/10(32/64bit), Mac
PC Software	Mosaic V2
SDK	C/C++, C#, Directshow
Optical Interface	C Mount
Data Interface	USB2.0
Operating Environment	Temperature: 0-40°C Humidity: 10%-85%
Camera Size	68X68X42.5[mm]
Camera Weight	236g



Forensic Analysis Software

IMAGE PROCESSING

1. Background subtraction and contrast enhancement of color or monochrome images
2. Arithmetic image functions (Boolean Math: Add, AND, OR, XOR, DIFF, MIN, MAX, +, -, /, *, And Simple).

ROUTINE FILTERS

1. Invert, Brightness, Contrast, Hue, Saturation, Blur, Noise Remove, Emboss, Engrave, Gamma R, Gamma G, Gamma B, Yellow, Magenta, Cyan, Mosaic, Smooth, Desaturation, Pseudo Color, Colorize, Oilify, Despeckle, Postarize.

SPECIAL FILTERS & KARNELS

High Boost, High Spatial, Low Pass Spatial, Ranking (Max, Med, Min), Point detection, Line detection, Homogeneity

EDGE DETECTION

Laplacing, Sobel, Kirsch, Prewitt Gradient, Shift & Difference, Combine, Contrast Base, Quick, Range And Variance.

VIEW

1. Zoom In/out
2. Zoomed preview
3. Rotation at 90, 180, 270 or custom
4. Image flipping: horizontal or vertical axis
5. Intensity histogram.
6. Image Information
7. Redo/Undo on all operations.
8. Ruler in Various units.
9. Slide show.

MORPHOMETRY

Skeletonizing, Pruning, SKIZ, Histogram Equalization, Histogram Smoothing, Histogram Peak, Histogram Valley, Segmentation by Over/Under and Quantized, Contouring, Dilation / Erosion on Binary, Gray & colored Images, Opening/ Closing on Gray & Binary Images, Special Opening/Closing, Split/Combine Of RGB, YUV, YIQ, XYZ & HSL, Changing any Image to 1, 4, 8 & 24 Bits, Medial Axis, Transformation, Halftone.

Image Addition, Image Average, Image Subtraction, Image Multiplication.

MEASUREMENT

- a) Spatial calibration
- b) Line measurements for Distance, Length, Width, Perimeter, Angle, Three Point Radius.
- c) Area by enclosed line controlled by four arrow keys available on keyboard arrows with zoomed preview.

REPORT

- a) Three options: Direct printout with original image processed image & Tabular results
- b) Export to MS Office or Excel for further modification.

IMAGE EDITING

1. Cut, Copy, and Paste.
2. Selected copy by free hand AOL controlled by four arrow keys available on keyboard or mouse with zoom preview.
3. Crop, duplicate, restore
4. Resize
5. Compression
6. Conversion to other format BMP, JPG, TIF, PNG, GIF & PSD
7. Flood fill or spray with selected color at selected portion.
8. Grid creation; 5X5, 10X10 & 100X100 lines.
9. Drawing tool curve, line, square, and circle with node control and provision to change color & thickness of the line.
10. Write text in any color or font.
11. Pointer to place on an object in four directions with provision to change its color & thickness.
12. Eraser works only on line, arrow or on any drawing tool (not on original image)
13. Camera Lucida
14. Montage feature to merge stored image together. Useful to Merge different focuses of same image.
15. Image stitching.
16. Highlighter.
17. Pixel by Pixel Correction by key board.
18. Multiple image folder with Search facility.
19. Filter application on selected area.



Specifications

Performance

Operating system

Windows 10 Home 64

Processor

Intel® Core™ i5-1035G1 (1.0 GHz base frequency, up to 3.6 GHz with Intel® Turbo Boost Technology, 6 MB L3 cache, 4 cores)^{5,7}

Processor family: 10th Generation Intel® Core™ i5 processor

Chipset

Intel® Integrated SoC

Memory

8 GB DDR4-3200 SDRAM (1 x 8 GB); Transfer rates up to 3200 MT/s.
Total slots: 2 SODIMM

Storage

1 TB 7200 rpm SATA HDD

DVD-Writer

Dropbox¹

Graphics

Integrated: Intel® UHD Graphics;

Discrete: NVIDIA® GeForce® MX 330 (2 GB GDDR5 dedicated);

Audio

Dual 2 W speakers

Display

60.5 cm (23.8") diagonal, FHD (1920 x 1080), touch, IPS, three-sided micro-edge, anti-glare, 250 nits, 72% NTSC

Screen-to-body ratio

84.8%⁵

Power

90 W Smart AC power adapter

Connectivity

Network interface

Integrated 10/100/1000 GbE LAN

Wireless connectivity

Realtek RTL8821CE 802.11a/b/g/n/ac (1x1) Wi-Fi® and Bluetooth® 4.2 combo

Miracast compatible; MU-MIMO supported

Ports

Rear: 2 SuperSpeed USB Type-A 5Gbps signaling rate; 2 USB 2.0 Type-A; 1 HDMI-out 1.4; 1 headphone/microphone combo; 1 RJ-45

HP 3-in-1 memory card reader

Expansion slots

2 M.2 (1 for SSD, 1 for WLAN)

Webcam

HP True Vision 720p HD privacy camera with integrated dual array digital microphone

Design

Product color

Jet black

Software

HP apps

HP Audio Switch; HP Support Assistant

Software

Netflix; ExpressVPN (30 day free trial)

1 month trial for new Microsoft 365 customers

Service & support

McAfee LiveSafe™²

Additional information

Part Number

P/N: 1U7G2EA #ABV

UPC/EAN code: 195122535285

Weight

5.85 kg;

Packed: 9 kg

Dimensions

54.08 x 20.45 x 40.93 cm;

Packed: 49.7 x 23.5 x 65.6 cm

Warranty

1 year limited parts, labour, and carry-in service.; You can expand the warranty coverage of your product to reach up to 3 years in total; for more information, check with your HP reseller.

Included accessories

USB black wired keyboard

USB Black wired mouse

Security management

Kensington MicroSaver lock slot



Website



Youtube



Instagram



Facebook

MICRO MEASURES & INSTRUMENTS

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