DIGITAL MICROSCOPES

TAGARNO T50

4K / 60 FPS digital microscope

4K 3840 × 2160 @ 60 FPS | 1.7x–311x | 370 mm Working Depth | Auto, Manual and Spot Focus | Motorized Height Adjustment | On-board Apps



OVERVIEW

The **TAGARNO T50** combines true 4K imaging at 60 frames per second with near-zero latency, so the live image is smooth and responsive like an eyepiece, with all the advantages of a digital system. It was developed together with Sony ISS and won the 2024 CIRCUITS ASSEMBLY NPI Award.

An industry-leading working depth of 370 mm, a wide field of view, magnification up to 311x, motorized height adjustment and magnetic accessories make it a microscope for demanding inspection tasks that is easy to use from day one.

KEY FEATURES

True 4K / 60 FPS

3840 × 2160 pixels at 60 frames per second with near-zero latency

Three focus modes

Auto focus keeps a moving sample sharp, Manual focus for a set depth, Spot Focus: click anywhere in the image to focus there

Preset import and export

copy proven inspection settings between T50 microscopes and workstations

Motorized height and magnetic accessories

magnetic lenses and ring lights; 370 mm working depth

On-board apps and Open API

measurement, ruler, image comparison, PNG reference, verification lines, DXF overlay and more

LENSES AND MAGNIFICATION

Magnetic lenses available for this microscope. Magnification depends on the monitor size (24" FHD or 27" 4K).

Lens	Magnification	Field of view	Lens to object distance	Resolution
Lens +3, 67 mm (2.64")	1.7x–37.8x (27" 4K)	15.8 mm–349 mm	328 mm	–
Lens +5, 67 mm (2.64")	2.8x–62.2x (27" 4K)	9.6 mm–210 mm	195 mm	–
Lens +10, 58 mm (2.28")	5.4x–125x (27" 4K)	4 mm–87 mm	78 mm	~3 microns
Lens +25, 26 mm (1.02")	13.4x–311x (27" 4K)	1.60 mm–49.80 mm	34 mm	~2.5 microns

TECHNICAL SPECIFICATIONS

CAMERA	
4K camera, 3840 × 2160 @ 60/50/30 Hz, 8.5 MP	✓
60 frames per second	✓
Optical zoom	✓
Video output	HDMI
16:9 aspect ratio	✓
DIMENSIONS	
Working height	34 mm–330 mm (1.34" - 13")
Working depth	370 mm (14.57")
Dimensions	H : 390 mm–635 mm (15.35' - 25"') W: 320 mm (12.6") D: 565 mm (22.24")
Weight	10.8 kg (23.81 lbs)
LIGHT	
Integrated light	✓
TAGARNO Ring light compatibility (White and UV)	Magnetic
TAGARNO Ring light compatibility (IR)	Lens mounted
Any clamp-mounted ring light (for Ø67 mm lens)	✓
CONTROL	
Control box included	Controller
Foot switch (Hands-free)	✓
Keyboard & Mouse	✓
Open API	✓
FEATURES	
Built-in image capture	✓
Image capture with USB 3.0 output and generic drivers	✓
USB accessories (keyboard, mouse, barcode, USB device)	✓
Camera settings	Basic + Advanced

Presets/favorites	✓
ESD safe	✓
On-board apps available	✓
Update microscope with system updates/firmwares	✓

SOFTWARE

The T50 runs the TAGARNO on-board apps and the Open API: TAGARNO Open API, Measurement software, Ruler app, Image comparison app, PNG reference app, Verification lines app, DXF overlay app, Focus stacking app, Color analyzer app, Particle analyzer app, Speck counter app, Watermark app, Trichinoscope app. See the TAGARNO catalogue or interelectronic.com for details.

ACCESSORIES FOR THE T50

Lenses: Lens +3, for 4K/Ultra HD, Lens +5, for 4K/Ultra HD, Lens +10, for FHD and 4K/Ultra HD, Lens +25, for FHD and 4K/Ultra HD, Lens cleaning kit; **Lighting:** Magnetic Ring light, Polarization kit for Magnetic Ring light, Ring light infrared (IR), Back light kit; **Control boxes:** Controller, Foot switch 4; **Tables:** Small separate XY table, Circular tilting table; **Monitors:** Monitor 27"; **App accessories:** White balance calibration card, White balance calibration card fixture.

Configuration, demo and quotation

InterElectronic is the TAGARNO partner for Hungary and Central Europe: application advice, sample tests, installation, training and service.

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Specifications according to TAGARNO. ✓ = included or supported, – = not available. Subject to change without notice.