

FINDING THE RIGHT MICROSCOPE

Why T50 is the right microscope for you



TAGARNO

INTRODUCTION

What's in this brochure?

This brochure is designed to help you decide if the TAGARNO T50 is the right microscope for you.

In this brochure, you'll be able to dive deep into the technical specifications of the T50 and what makes it unique compared to the other TAGARNO microscopes and competitive products.

Lastly, you'll see an overview of which accessories and apps the T50 is compatible with, giving you a full 360 degree view of how you can piece together the perfect inspection solution for you.

Let's get started!

CHAPTER

Why choose a digital microscope?

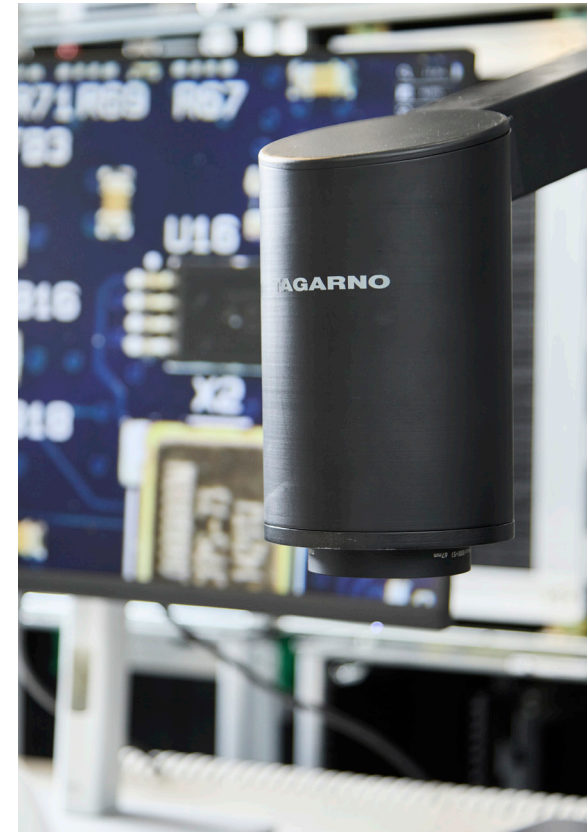
Let's start by looking at the benefits of choosing a digital microscope and why these systems are gaining popularity worldwide and across industries.

OVERALL BENEFITS

Why choose a digital microscope?

Digital microscopes have become increasingly popular across industries for a number of reasons:

- Thanks to auto focus, digital microscopes take all those little adjustments an operator usually has to make in order to see their sample clearly and do it all for them, creating more efficient work processes
- It's incredibly easy to document and share your findings, either by capturing photos as you go or via plug-and-play integration into online meetings on Teams, Google Meet, etc
- The digital display makes back, neck and shoulder pain a thing of the past, reduces operator fatigue and allows for collaborative work and easy staff training
- Often, you can customize the microscope and use advanced features to create consistency across your inspections, work more efficiently and make more accurate inspections



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Why choose TAGARNO T50?

Now, let's have a look at the specific benefits of the T50 and why you should choose this specific microscope.



BENEFIT 1

Enjoy 4K live images like never before!

You'll notice it instantly when using the T50: The crispy images and immediate display of what's happening underneath the microscope on the monitor.

In more technical terms, the T50 displays 4K resolution images at 60 frames per second (FPS), giving you live images like never before.

Not only is T50 the first 4K microscope from TAGARNO, it also outputs 4K/60FPS natively by using FCB ER9500 block camera from Sony rather than using methods used by other 4K microscopes on the market like cropping or pixel binning.



BENEFIT 2

Detects and corrects out of focus images

T50 can detect blurry or out of focus images before using its focus motor and motorized height adjustment to adjust itself to the correct lens to object distance, giving you the sharpest image at all times.

BENEFIT 3

Designed for any inspection task

With an impressive 370 mm working depth and a field of view that reveals critical details on small as well as large samples, the T50 is designed to be used for a wide variety of tasks.

This combined with built-in vibration reduction features and magnetic lenses creates a user experience never before seen within digital microscopy, no matter where or how you're using it.



BENEFIT 4

Choose how to control the T50

Although TAGARNO T50 comes with a unique controller that's designed with a tactile wheel button for intuitive menu navigation, touch-distinguishable buttons and an ergonomic slope for comfortable use, you choose how to control the microscope.

Connect a keyboard or mouse to the T50 if you prefer, or control the microscope via TAGARNO's Open API to integrate it to your own setup.



BENEFIT 5

Customize and keep it updated

To use the T50's full potential, make sure to check out TAGARNO's portfolio of userfriendly software apps that are designed to help you perform more accurate inspections and work more efficiently.

By customizing the T50 with the right apps for your processes and making sure that it's always updated with the latest firmware, you prolong the lifespan of the microscope by allowing it to evolve with your needs.

BENEFIT 6

A sleek all-in-one solution

T50 has a built-in computer that allows all features and apps to run directly on the microscope without connecting a computer. Similarly, the magnetic ring light does not require a separate controller.

This makes T50 a great fit for smaller work stations where you don't have room for additional hardware or if you prefer a clean setup with a minimum number of cables and accessories lying around.

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Let's look at the technical specifications

What's the maximum magnification and field of view on the T50?
Time to get to know the microscope in more details.



Technical specifications

Lens compatibility	
<p>Lens +3, for 4K:</p> <ul style="list-style-type: none"> Field of view: 15.8 mm – 349 mm (0.62" – 13.74") Magnification: 1.7x – 37.8x Lens to object distance: 328 mm (12.91") 	Yes
<p>Lens +5, for 4K:</p> <ul style="list-style-type: none"> Field of view: 9.6 mm – 210 mm (0.38" – 8.27") Magnification: 2.8x – 62.2x Lens to object distance: 195 mm (7.68") 	INCLUDED
<p>Lens +10, for 4K:</p> <ul style="list-style-type: none"> Field of view: 4.0 mm – 86 mm (0.16" – 3.39") Magnification: 5.4x – 125x Lens to object distance: 78 mm (3.07") 	Yes
<p>Lens +25, for 4K:</p> <ul style="list-style-type: none"> Field of view: 1.60 mm – 10 mm (0.06" – 0.39") Magnification: 13.4x – 311x Lens to object distance: 34 mm (1.34") 	Yes
<p>Lens +50, for 4K:</p> <ul style="list-style-type: none"> Field of view: 0.80 mm – 5 mm (0.03" – 0.20") Magnification: 26.3x – 622x Lens to object distance: 34 mm (1.34") 	Yes

Dimensions

Working height (Min – Max)	34 mm – 330 mm (1.34” – 13”)
Working depth	370 mm (14.57”)
Dimensions (HxWxD)	390 mm – 635 mm x 320 mm x 325 mm (15.35” – 25” x 12.60” x 12.80”)
Weight	10.8 kg (23.81 lbs)

Camera quality

Camera resolution	4K (3840x2160), 8.5MP @ 60/50/30Hz
60 frames per second	Yes
Optical zoom	Yes
Video output	HDMI
16:9 aspect ratio	Yes

Lighting

Integrated light	Yes
TAGARNO Ring light compatibility (White and UV)	Magnetic
TAGARNO Ring light compatibility (IR)	Lens mounted
Compatibility with any clamp-mounted ring light (suitable for Ø67mm objective/lens)	Yes

Find more
tech specs



CHAPTER

Accessories and software

4

Make the most out of your microscope with a wide range of accessories and softwares.

Over the next pages, you'll learn how you can customize the T50 to create the perfect setup for your needs.

COMPATIBILITY

Software

Note: All apps run directly on the microscope. No external computer needed.

Included



Ruler app

Use on-screen ruler for quick measurements directly on the microscope

INCLUDED



Focus stacking app

Create ultra-sharp images with no blurred or out of focus areas

COMING SOON



Watermark app

Save images with customized watermark and/or info stamp

COMING SOON

For measuring



Measurement app

Perform highly accurate measurements directly on the microscope



Verification lines app

Verify your samples with user-defined tolerances on top of the microscope image

COMING SOON

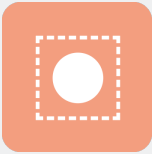
Other



Image comparison app

Create and use image library for assistance during inspections

COMING SOON



DXF overlay app

Find components on PCBs in seconds with search feature

COMING SOON



PNG reference app

Create and superimpose graphics over your samples for more efficient inspections

COMING SOON

Interfaces



TAGARNO Open API

Use Open API to integrate the microscope to your own setup

COMPATIBILITY

Accessories

Lenses

Choose the lenses that suit your needs.



Lens +3 incl. magnetic kit



Lens +25 incl. magnetic kit



Lens +5 incl. magnetic kit

INCLUDED



Lens +50 incl. magnetic kit



Lens +10 incl. magnetic kit

COMPATIBILITY

Accessories

Control options

Different ways to control your microscope.



Controller

Intuitive menu navigation, touch-distinguishable buttons, and ergonomic slope for comfortable use

INCLUDED



Foot switch 4

Hands-free control of magnification, focus, and photo capture, enhancing workflow efficiency

Ring light kits

Get the right lighting for your samples.



Magnetic Ring light kit

See details clearly with Magnetic Ring light kit that includes a Diffusor



Magnetic UV Ring light

A magnetic ring light for your UV inspections

COMING SOON

Other lighting accessories

More accessories to see your samples clearly.



Backlight kit

Sub illumination to view contours clearly



Fresnel lenses

Focus the Ring light where you need it

- Fresnel lens 40 mm is for lens +25 and +50
- Fresnel lens 100 mm is for lens +10

COMING SOON



Polarizer kit

Eliminate disturbing direct reflections

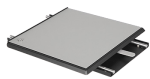
Tables

Make inspections easier with table options.



Circular tilting table

Tilt and see sample from various angles



Small separate XY table

Steady XY table for easy control of magnified sample

Monitors and app accessories

Complete your setup.



27" 4K/Ultra HD monitor

See your magnified samples clearly with a high quality monitor.



White balance calibration cards

Establish true colors on the microscope



Calibration cards

Achieve accurate measurements in Measurement app

CHAPTER

What others say about T50 and TAGARNO

At TAGARNO, we're proud to have earned the trust and loyalty of a diverse range of customers across the globe and of varying sizes.

Let's hear what they have to say about the TAGARNO microscopes.



“I must say, I am thoroughly impressed with its capabilities and functionalities of the TAGARNO microscope.”

M.Eng. Basel Adams, Research assistant and Project Manager at Fraunhofer Institute for Reliability and Microintegration IZM (IZM)

“A vast majority of our employees voted for the TAGARNO solution among different options because of its user friendliness”

Loïc Boutillier,
Technician Methods at ALL CIRCUITS

“Our most experienced technicians also switched to TAGARNO when they realized the ease of use and benefits of analyzing the magnified seeds displayed on a screen”

Dot Vittrup,
Head of Quality Management at DLF

“The TAGARNO microscope is a very nice piece of hardware and helps with inspection of electronics while being very ergonomic responsible.”

Christopher Bullock-D’Arcy,
Electronic technician at Boréas Technologies

IN SUMMARY

Is T50 the right microscope for you?

If you're still unsure if the TAGARNO T50 is the right microscope for you, here's a few questions to consider:

- Do you need crystal clear 4K images with no delay, allowing you to see even the finest details on your products?
- Do you need a singular system that can do low as well as high power magnification and where changing lenses is easier than ever before?
- Do you want a sleek microscope in high quality materials with multiple control options?
- Do you need to improve your efficiency, reduce user errors and create consistency across your inspections?
- Do you want a future proof solution that can be updated with new features as they are released?

If your answer is yes to any of the above, we're confident the TAGARNO T50 is a great match for you and will take your inspections to new heights.



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