

# IS SERIES



**Inspection Video Microscopes**

# 3 IS-01 - Overview

OPTIKA **IS-01** is a compact, all-in-one video microscope with **integrated HDMI camera and built-in software**.

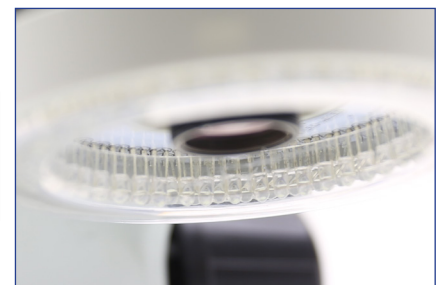
Ideal for achieving up to 50X magnifications and performing measurements.

It's recommended when repeatability is required thanks to the click-stop mechanism at different magnifications steps.

With **60 frames** per second at full resolution and **1080 HD** image quality, you can see, on a plugged HDMI monitor, the same as what you see through the microscope eyepieces.



Integrated HDMI camera and built-in software



Click stop mechanism  
Zoom  
0.7x to 5x

LED Ring illumination  
integrated system



Wireless mouse included



# IS-01SMD - Overview

OPTIKA **IS-01SMD** is a compact, all-in-one video microscope with **integrated HDMI camera and built-in software**. Ideal for achieving high magnifications and performing measurements.

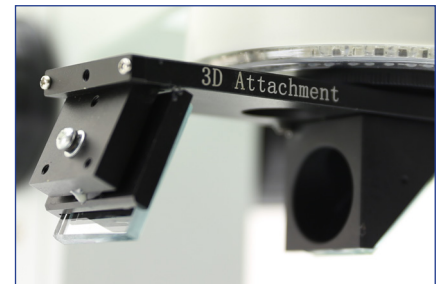
It's recommended when repeatability is required thanks to the click-stop mechanism at different magnifications steps.

With **60 frames** per second at full resolution and **1080 HD** image quality, you can see, on a plugged HDMI monitor, the same as what you see through the microscope eyepieces. **The 3D rotational angle view attachment and the 7x to 50x zoom of IS-01SMD provide an unparalleled real-time 3D view ideal for PCB and Medical Devices inspection that is simple to use and remarkable in image quality.**

Long working distance allows soldering rework and assembly by watching LCD screen. The Built-in camera is fitted with USB2.0 slots for storing image and video without any computer using a USB flash disk. Thanks to the measurement software, it is possible to perform dimensional measurements on screen.



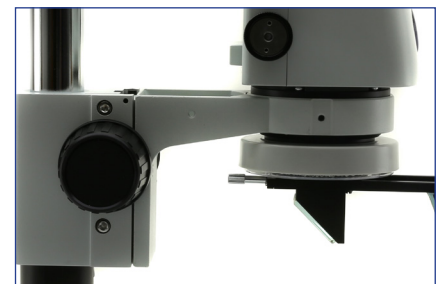
Integrated HDMI camera and built-in software



Click stop mechanism  
Zoom  
0.7x to 5x



LED Ring illumination  
integrated system



3D Attachment with rotational angle  
view



Wireless mouse included



# IS-01/IS-01SMD - Built-it Software Overview

**Control** | Measurement

Exposure

Bright  0

Gain  0

Shutter  0

**AE** | ME

Color

Red  0

Green  0

Blue  0

**AWB** | MWB

Function

Contrast  0

Sharp  0

Saturati  0

Ezoom  0

Photo Path  .jpg

Naming  Auto  Custom

Save graphic  yes  no

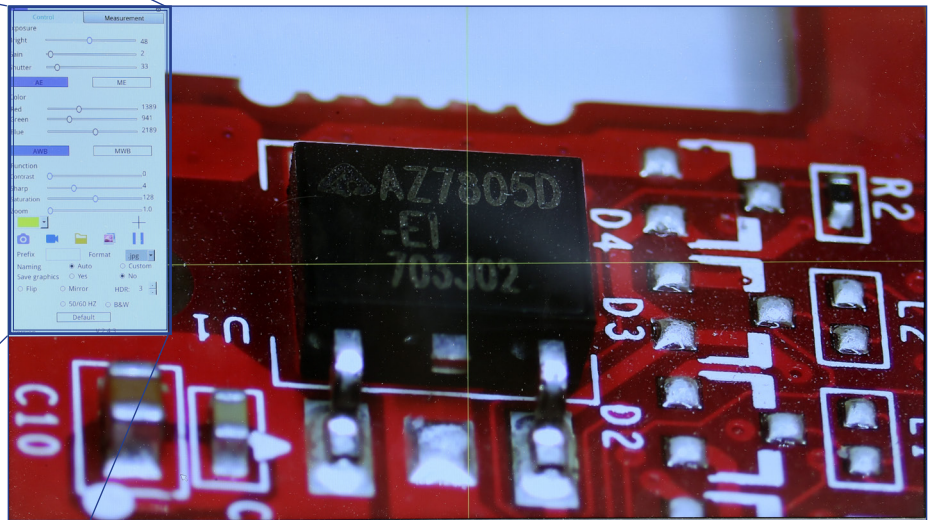
Flip  Mirror: HDR: 0

50/60 |  B&W

**Default**

Version 2.3.7

Main camera control panel



**Control** | Measurement

Assist Tools

Main Tool

T

Calibration

Calibrate

Scan Da

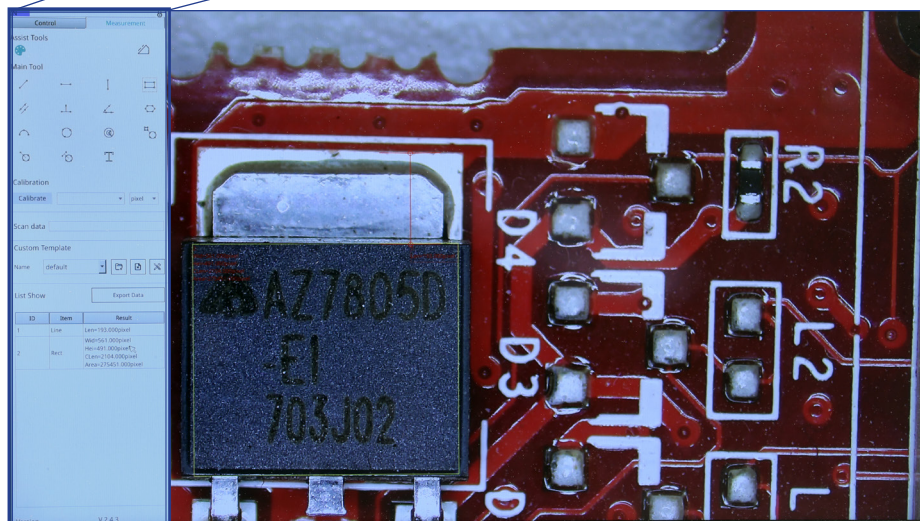
Custom Template

Name

List Show

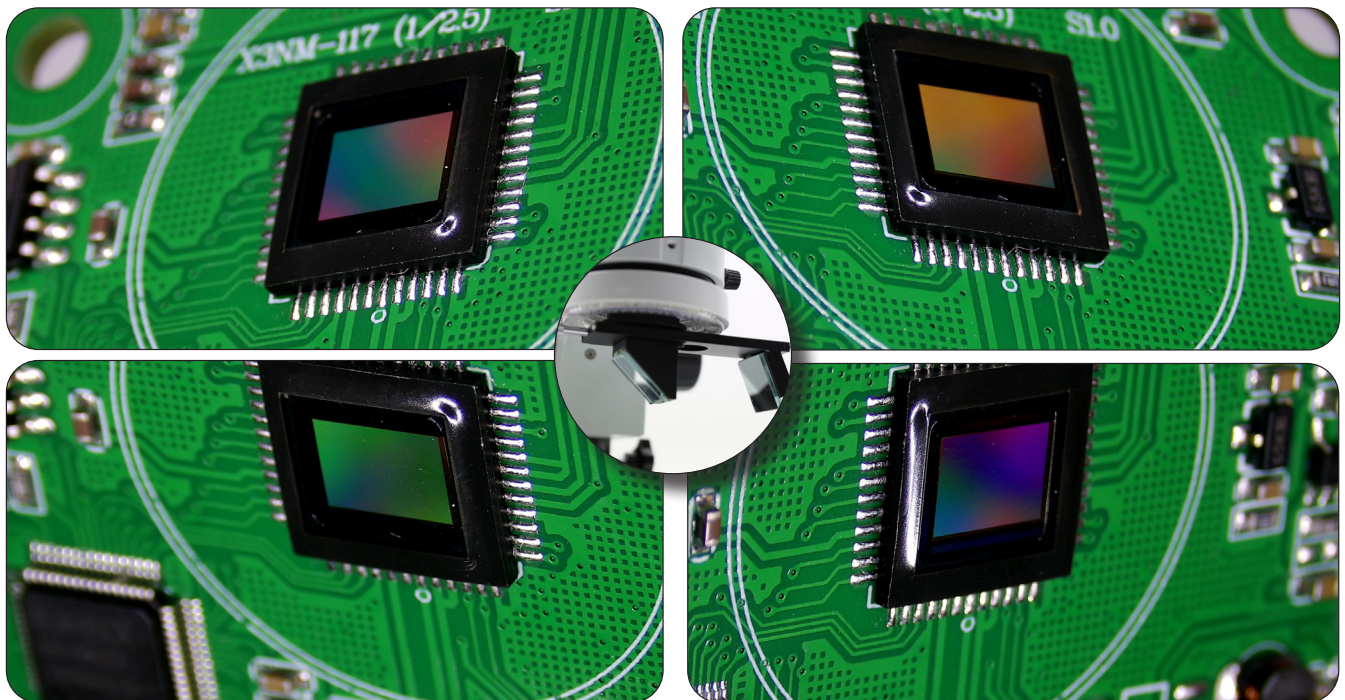
ID	Item	Result

Main measurement control panel

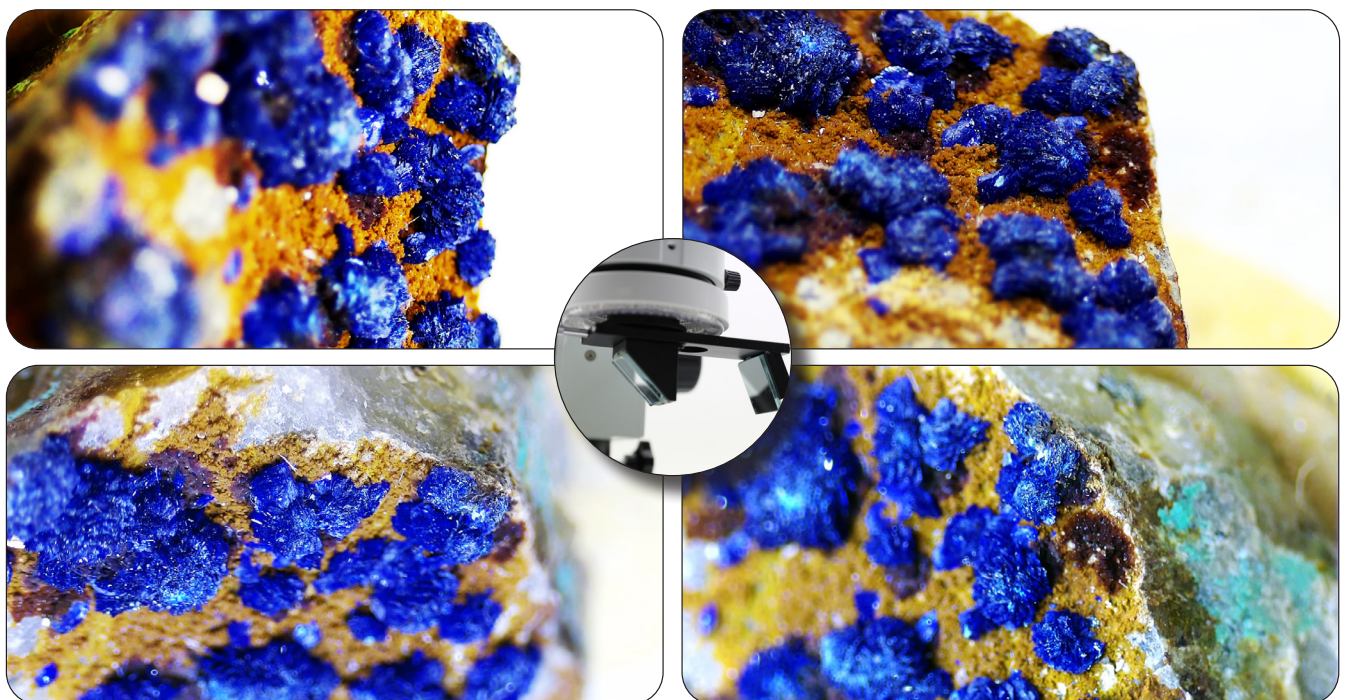




# IS-01SMD - Straight/3D view quick switching



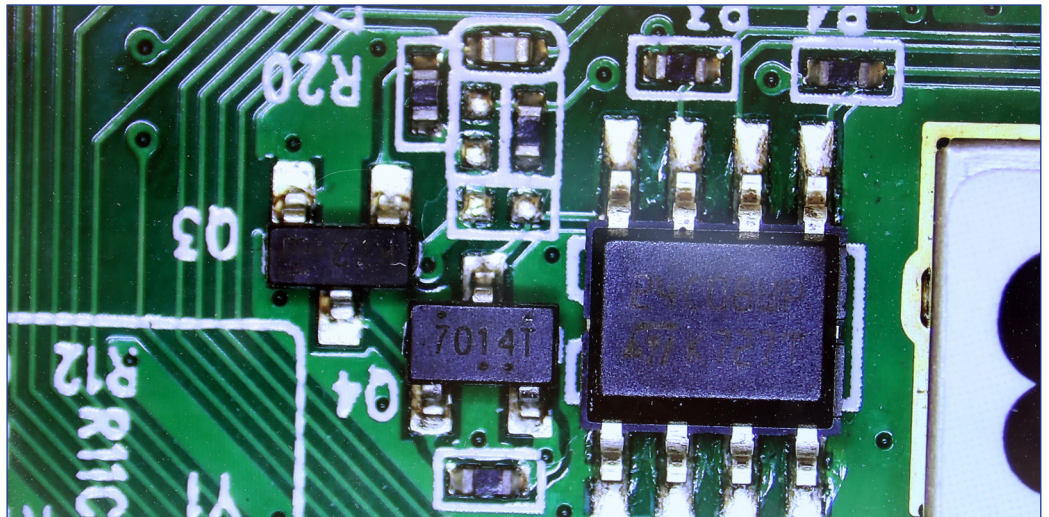
Captures of samples obtained by rotating the 3D attachment of the IS-01SMD model (optional on the IS-01 model)



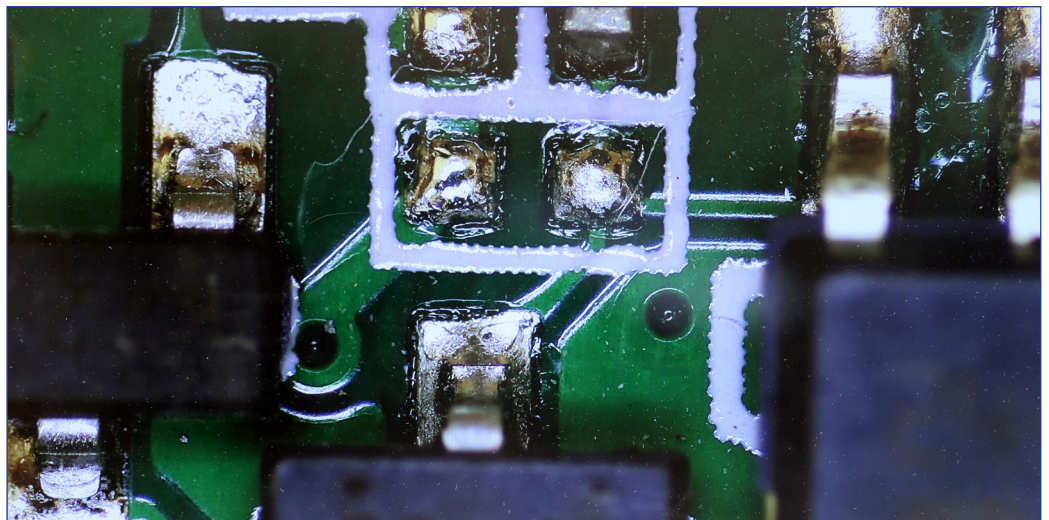


# IS-01 - Straight View Zoom Factor

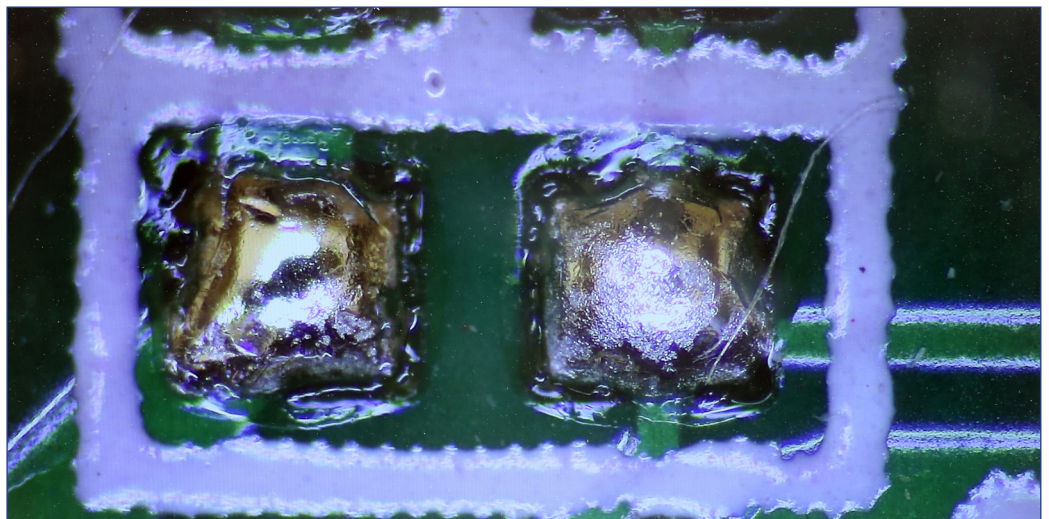
Straight View 0.7X



Straight View 2X



Straight View 5X



# IS-01/IS-01SMD - Technical Specifications

## IS-01/IS-01SMD Main Body

Observation Method	
Brightfield	Yes
Head	
Construction material	Plastic mold / Aluminum gears
Objective	
Optical system	160 mm
Anti-fungus treatment	Yes
Objective Type	Achromatic
Zoom type	Parfocal achromatic
Working distance (mm)	110
Standard magnifications	0.7x-5x
Zoom ratio	7.14
Zoom click stops	At 0.7x, 1x, 1.5x, 2x, 2.5x, 3x, 4x, 5x
Focusing System	
Type	Coarse
Coarse total travel (mm)	50
Adjustable tension	Yes
Head holder internal diameter (mm)	76
Head	
Type	Pillar
Pillar diameter (mm)	32

Incident Illumination	
Type	LED
Light source power (W)	1
Illuminance (lux)	60000
Brightness control	Manual
Lifetime (hours)	> 65000
Temperature (K)	6300
Max. required power (W)	3
Power Supply for Illumination	
Type	External
Microscope connector	Jack, 2.1 mm
Power plug type	Multi-plug (EU, UK, US)
Input voltage	110/240 Vac, 50/60 Hz
Output voltage	12 Vdc
Additional Information	
Maximum sample height (mm):	150
Product Dimensions	
Total height (mm)	510
Total width (mm)	320
Total depth (mm)	260
Weight	4.3 kg

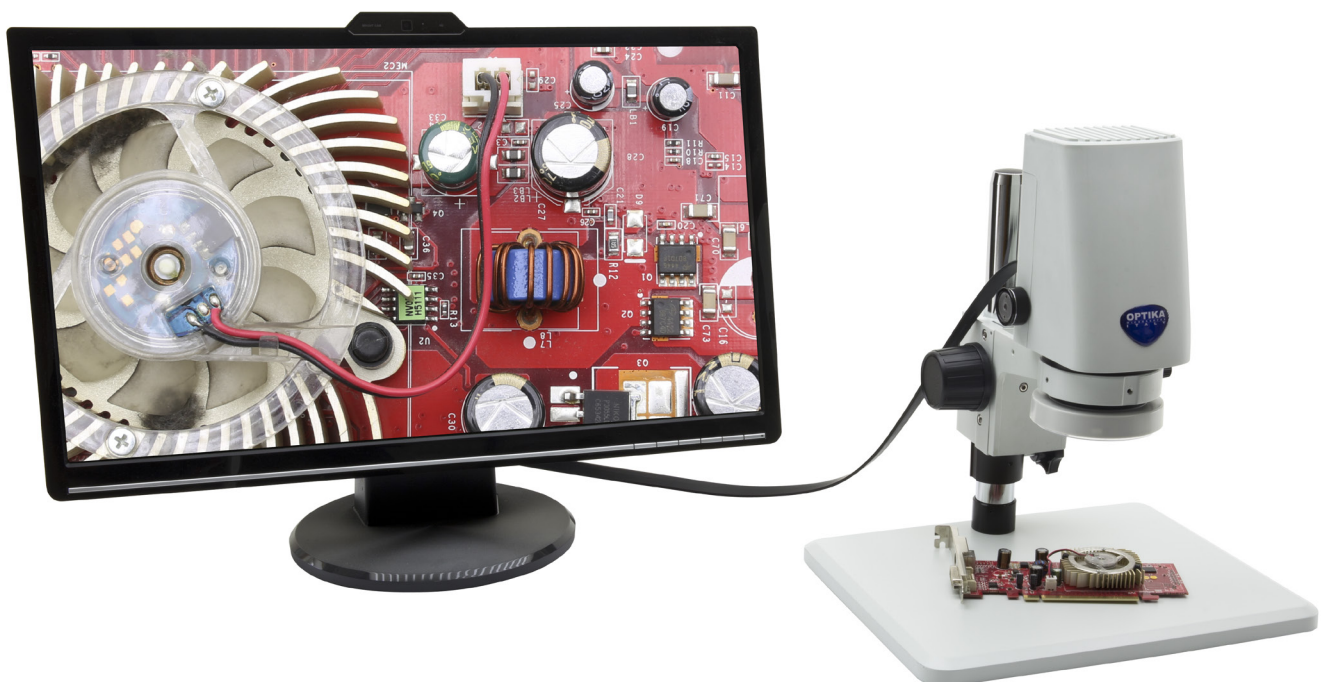
## IS-01/IS-01SMD Digital Head

Resolution (MP)	2
Sensor type	CMOS
Sensor size	1/2.8"
Sensor aspect ratio	16/9
Full image size	1920x1080
Pixel size (µm)	2.9x2.9
Frame rate	60 fps (1920x1080)

S/N ratio (dB)	>50
Dynamic range (dB)	>50
Sensitivity (V/lux*s @550nm)	0.4
Exposure time (s)	0.02 - 1/10000
USB type	2.0
Software	built-in

## IS-01SMD 3D Attachment

Swing-out	Yes
360° Rotatable	Yes





## 3 IS-02 - Overview

Advanced inspection system suitable for intensive use, ideal for video inspection in quality control of electronics, mechanics, and other industrial applications.

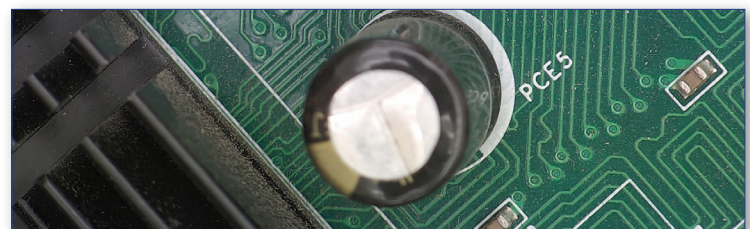
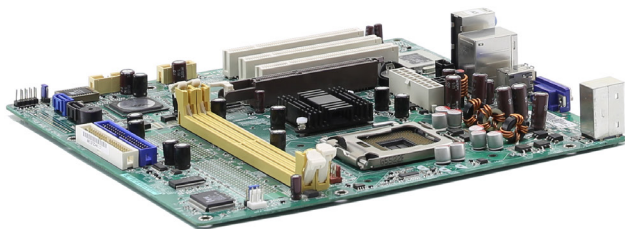
IS-02 includes the C-HAF **real-time full HD auto-focus camera** with **relevant zooming capabilities** (optical zoom is 1x...14x, electronic zoom is 1x...6x).

Crystal clear 1080p live view is shown through a large HD monitor, with incredibly fast connection (60 fps). Its angle of view is **fully adjustable** and it enables **instant focus** in less than 1 sec. with no need to constantly adjust lens position. In addition, the working distance goes to infinity, making it the **recommended solution to inspect multi-layered objects**.

All functions are controlled directly from the screen via a wireless mouse. Images and videos can be saved on the SD card and easily transferred on any device. The system is completed by the SZ-STLX **boom stand** with a **special joint to enable any rotation** (transversal and longitudinal): the longitudinal movement is through the sliding of the horizontal rail (lockable); whilst also the overall height is both adjustable and lockable.



Reduce inspection time with real-time focus from any angle



# IS-02 - Technical Specifications



## IS-02

### HDMI MONITOR

Type	LCD screen 360° rotating, freely inclinable for ergonomic vision
Size	11,5"
Power supply	12V / 2,5A

### CAMERA

HDMI camera resolution (MP)	2
Camera resolution (n° of pixels: W x H)	1920x1080
HDMI signal output	Yes
Trigger signal output	Yes
Sensor size	1/2.8"
Sensor technology	CMOS
Sensor type	SONY EXMOR
Optical zoom	1x-14x
Digital zoom	1x-6x
Rolling shutter	Yes
Autofocus	Yes
Image format	16/9
Pixel size (mm)	2.9x2.9

Frame rate full resolution (fps)	60@1920x1080
Camera power	5V 2A
Dimensions (mm)	88 x 72 x 125
Weight (Kg)	0.57

### STAND

Type	Coarse simple overhanging
Coarse total travel (mm)	50
Adjustable tension	Yes
Head holder internal diameter (mm)	76
Pillar diameter (mm)	32
Maximum sample height (mm)	270 (from bench)
Total height (mm)	430
Base height (mm)	58
Base width (mm)	210
Base depth (mm)	255
Horizontal arm (mm)	790
Product weight (kg)	16.3

### ACCESSORIES

Accessories Included:	Wireless mouse, 30 cm HDMI cable, 8 GB micro SD, Power supply
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**No need to constantly re-adjust the lens focus**

**1/2.8" CMOS 2MP camera with powerful 1x-14x optical zoom (plus electronic zoom)**

**High-performance boom stand with special joint for customized camera positioning**

**On-board controls and cross grid**

**Working distance is between 10 cm and infinity, making it the ideal solution to inspect multi-layered and large objects**

**Sliding horizontal rail for longitudinal positioning; adjustable longitudinal limit; adjustable and lockable height**

**Sensor's main features are the high sensitivity and incredible color fidelity: save money (no need of external illuminators or ring lights)**

**Wireless mouse and SD card are included**



## 3 IS-03 - Overview

Advanced inspection system suitable for intensive use, ideal for video inspection in quality control of electronics, mechanics, and other industrial applications.

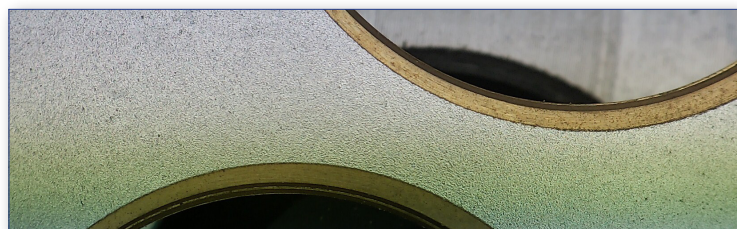
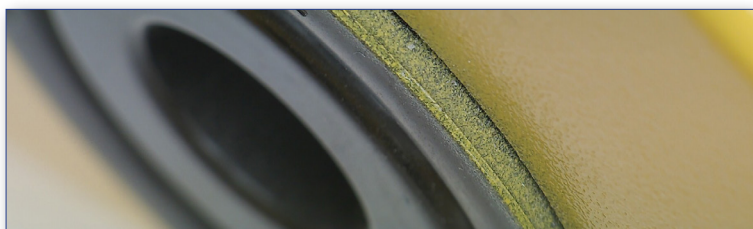
IS-03 includes the C-HAF **real-time full HD auto-focus camera** with **relevant zooming capabilities** (optical zoom is 1x...14x, electronic zoom is 1x...6x).

Crystal clear 1080p live view is shown through a large HD monitor, with **incredibly fast connection** (60 fps). Its angle of view is **fully adjustable** and it enables **instant focus** in less than 1 sec. with no need to constantly adjust lens position. In addition, the working distance goes to infinity, making it the **recommended solution to inspect multi-layered objects**.

All functions are controlled directly from the screen via a wireless mouse. Images and videos can be saved on the SD card and easily transferred on any device. The system is completed by the **table clamping SZ-STL5 highly versatile flexible arm stand**, 360° rotating, ideal for high and large samples and on every bench thanks to its compact footprint, saving valuable space on the bench. A **wall mounting system** is also included.



Reduce inspection time with real-time focus from any angle





# IS-03 - Technical Specifications



## IS-03

### HDMI MONITOR

<b>Type</b>	LCD screen 360° rotating, freely inclinable for ergonomic vision
<b>Size</b>	11,5"
<b>Power supply</b>	12V / 2,5A

### CAMERA

<b>HDMI camera resolution (MP)</b>	2
<b>Camera resolution (n° of pixels: W x H)</b>	1920x1080
<b>HDMI signal output</b>	Yes
<b>Trigger signal output</b>	Yes
<b>Sensor size</b>	1/2.8"
<b>Sensor technology</b>	CMOS
<b>Sensor type</b>	SONY EXMOR
<b>Optical zoom</b>	1x-14x
<b>Digital zoom</b>	1x-6x
<b>Rolling shutter</b>	Yes
<b>Autofocus</b>	Yes
<b>Image format</b>	16/9
<b>Pixel size (mm)</b>	2.9x2.9
<b>Frame rate full resolution (fps)</b>	60@1920x1080

<b>Camera power</b>	5V 2A
<b>Dimensions (mm)</b>	88 x 72 x 125
<b>Weight (Kg)</b>	0.57

### STAND

<b>Type</b>	Coarse, Pantograph, with table and wall clamps
<b>Coarse total travel (mm)</b>	50
<b>Adjustable tension</b>	Yes
<b>Head holder internal diameter (mm)</b>	76
<b>Pillar diameter (mm)</b>	35
<b>Total height (mm)</b>	327
<b>Total width (mm)</b>	300
<b>Total depth (mm)</b>	800
<b>Horizontal arm (mm)</b>	737
<b>Product Weight (kg)</b>	5.1

### ACCESSORIES

<b>Accessories Included:</b>	Wireless mouse, 30 cm HDMI cable, 8GB micro SD and power supply
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**No need to constantly re-adjust the lens focus**

1/2.8" CMOS 2MP camera with **powerful 1x-14x optical zoom** (plus electronic zoom)

**On-board controls** and cross grid

Working distance is **between 10 cm and infinity**, making it the ideal solution to inspect multi-layered and large objects

Sensor's main features are the **high sensitivity** and **incredible color fidelity**: save money (no need of external illuminators or ring lights)

**Small footprint to save valuable space** on the bench; **table-clamp and wall-mount**

**Freely orientable arm and joint**

Wireless mouse and SD card are included

### Real-time Full HD Auto-Focus Inspection Camera

**OPTIKA C-HAF** is a real-time full HD auto-focus inspection camera, with 2 MP resolution to view crystal clear **1080p** images/videos on HD monitor, through HDMI connection at **60 fps**. Its angle of view is **fully adjustable**.

Achieve **instant focus** without the need to constantly adjust your lens with the incredibly fast focusing system (acquisition time is lower than 1 sec.) without the inconvenience of having to constantly re-adjust the lens focus.

Working distance is between 10cm and infinity, making it the ideal solution to inspect multi-layered objects, extremely quickly. The camera is equipped with **1x-14x optical zoom** and 1x-6x electronic zoom.

All functions are controlled **directly from the screen**, with the support of mouse, and images and videos can be directly acquired on SD card (mouse and SD card are included).

#### Main functions are:

- Possibility to perform automatic or manual white balance, independently setting RGB parameters for a perfect color reproduction
- Choose between automatic or manual exposure
- With HDR function, a sequence of images is captured at different exposures, and they are combined into a single image
- Trigger function allows the connection with an external controller and the file acquisition is possible with a determined sequence
- Possibility to set horizontal and vertical lines, in different colors and positions, to generate a custom grid directly on the HDMI screen

OPTIKA C-HAF comes with fixing holes to be connected with "custom" supports or brackets.

It is available also combined with a boom stand (as **IS-02**) or a compact stand with table clamp or wall-mount (as **IS-03**).



Reduce inspection time with real-time focus from any angle

# C-HAF - Technical Specifications

No need to constantly re-adjust the lens focus.



1/2.8" CMOS 2MP camera with **powerful 1x-14x optical zoom** (plus electronic zoom)

## C-HAF

### CAMERA

HDMI camera resolution (MP)	2
Camera resolution (n° of pixels: W x H)	1920x1080
HDMI signal output	Yes
Trigger signal output	Yes
Sensor size	1/2.8"
Sensor technology	CMOS
Sensor type	SONY EXMOR
Optical zoom	1x-14x
Digital zoom	1x-6x
Rolling shutter	Yes
Autofocus	Yes
Image format	16/9
Pixel size (mm)	2.9x2.9
Frame rate full resolution (fps)	60@1920x1080
Camera power	5V 2A
Dimensions (mm)	88 x 72 x 125
Weight (Kg)	0.57

Sensor's main features are the **high sensitivity** and **incredible color fidelity**: save money (no need of external illuminators or ring lights)

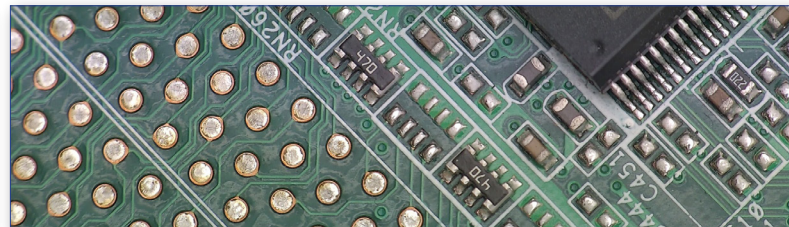


**Working distance is between 10 cm and infinity**, making it the ideal solution to inspect multi-layered and large objects



**On-board controls** and cross grid

Wireless mouse and SD card are included





v 6.8.0 - OPTIKA reserves the right to make corrections, modifications, enhancements, improvements and other changes to its products at any time without notice.

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## Headquarters and Manufacturing Facilities

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**OPTIKA® India** [india@optikamicroscopes.com](mailto:india@optikamicroscopes.com)

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**OPTIKA® Central America** [camerica@optikamicroscopes.com](mailto:camerica@optikamicroscopes.com)