

OPTIKA[®]
MICROSCOPES
I T A L Y

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**.

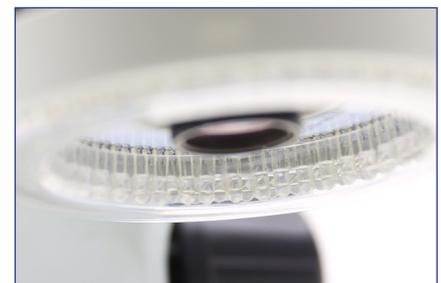
Ideal for achieving up to 50X magnifications and performing measurements.

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.

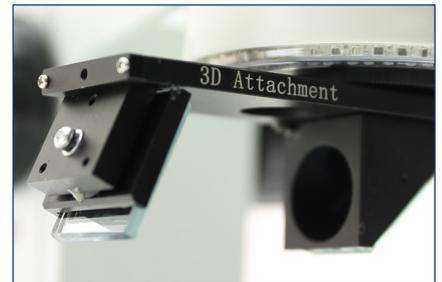
It's recommended when repeatability is required thanks to the click-stop mechanism at different magnifications steps.

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

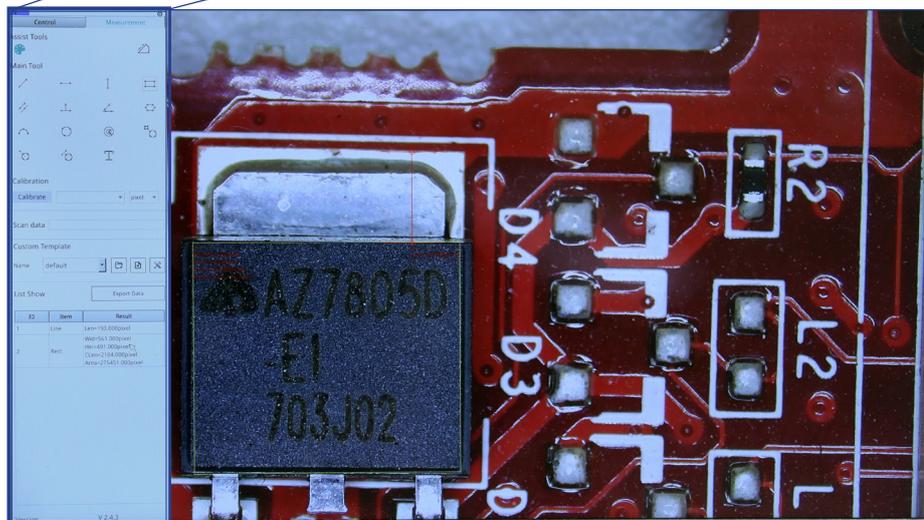
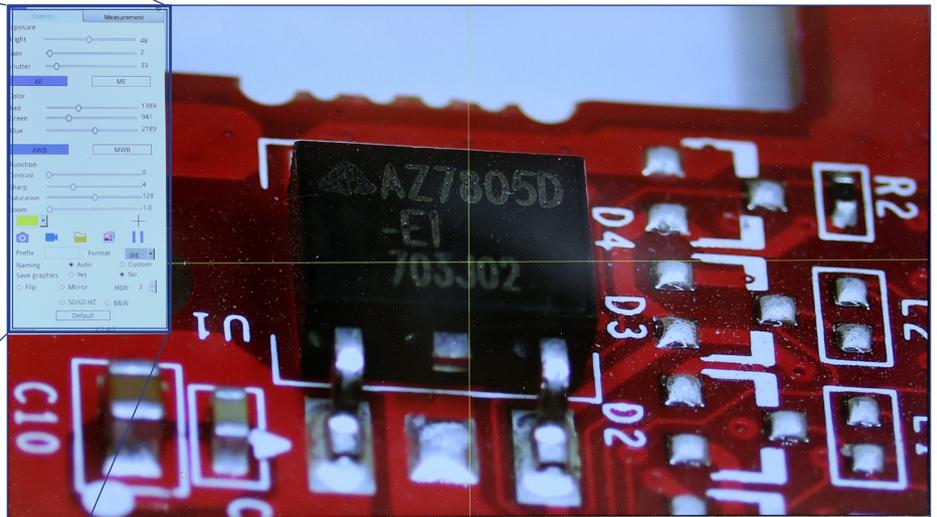
Flip Mirror HDR: 0

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

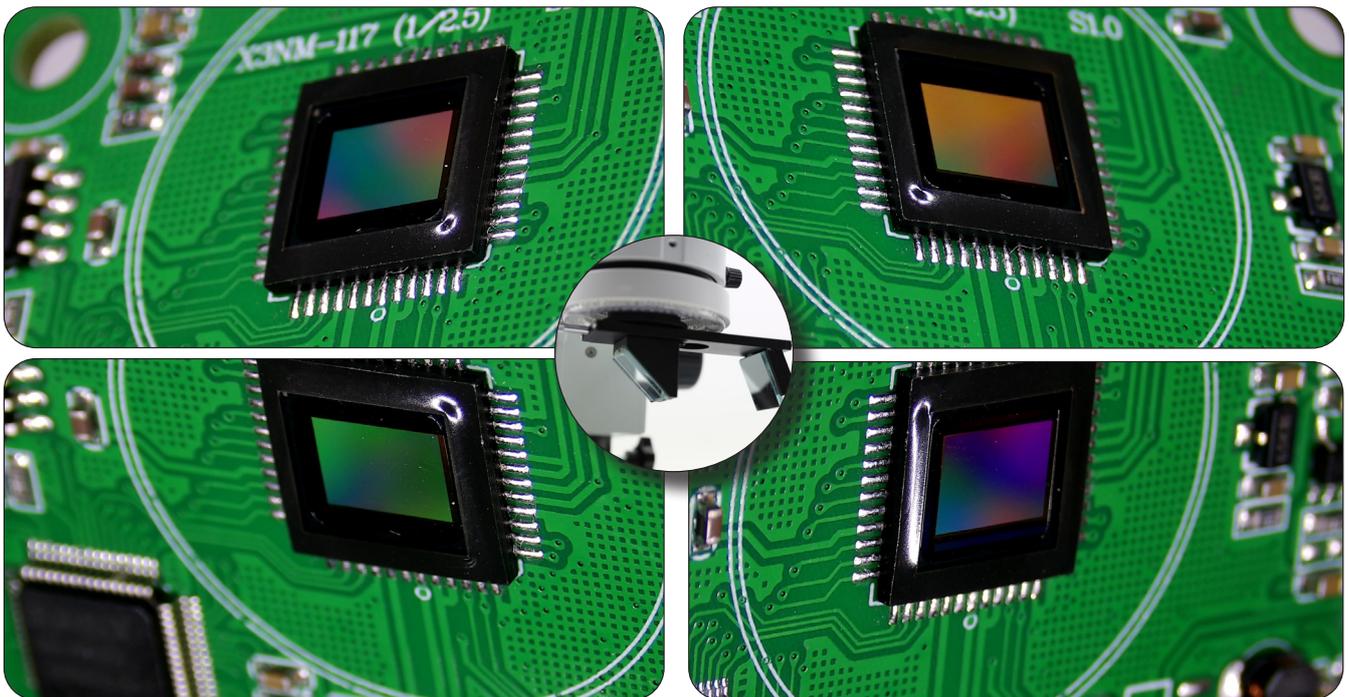
Name

List Show

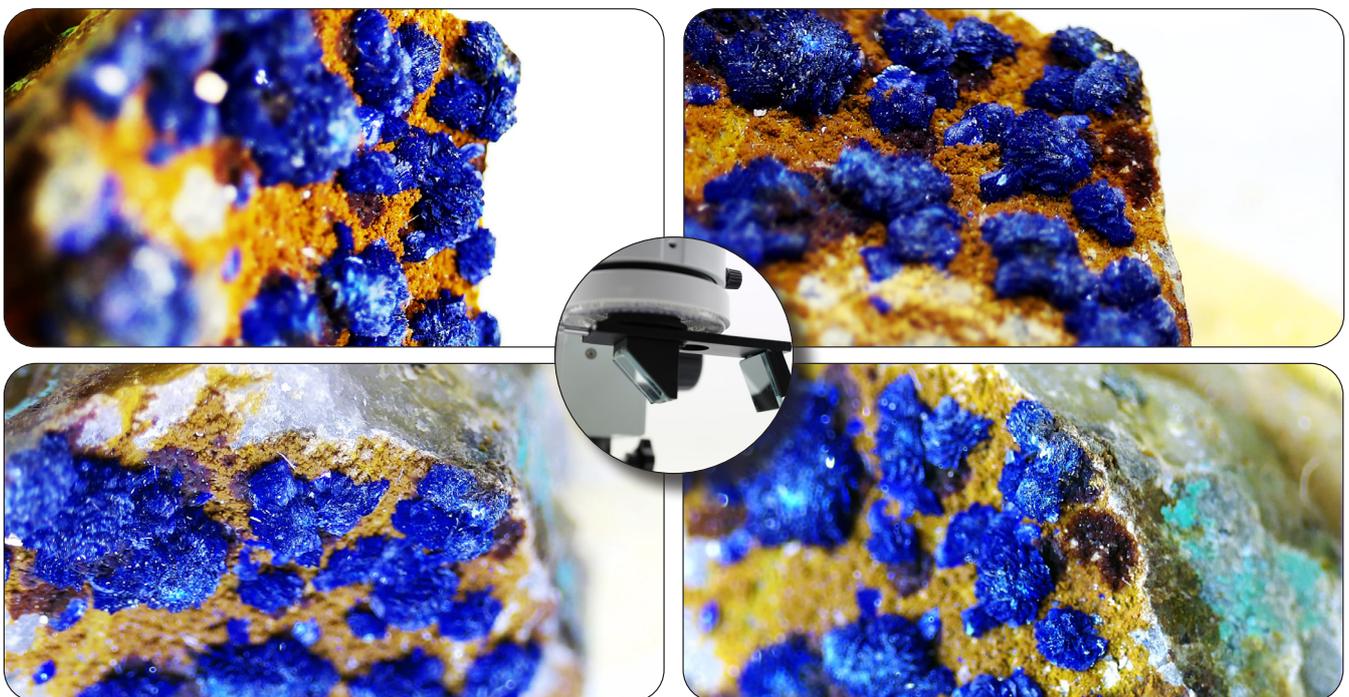
ID	Item	Result

Main measurement control panel

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

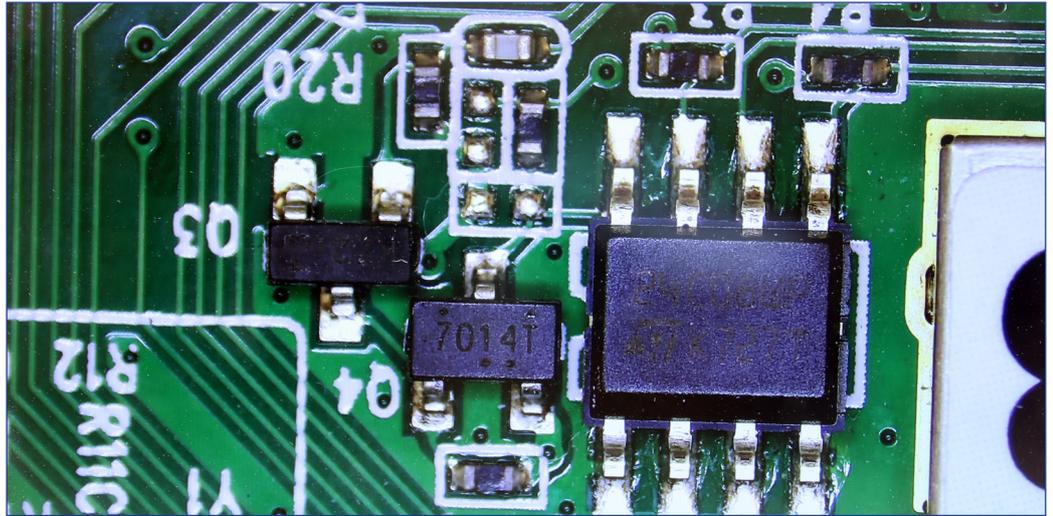


Captures of samples obtained by rotating the 3D attachment of the IS-01SMD model (optional on the IS-01 model)

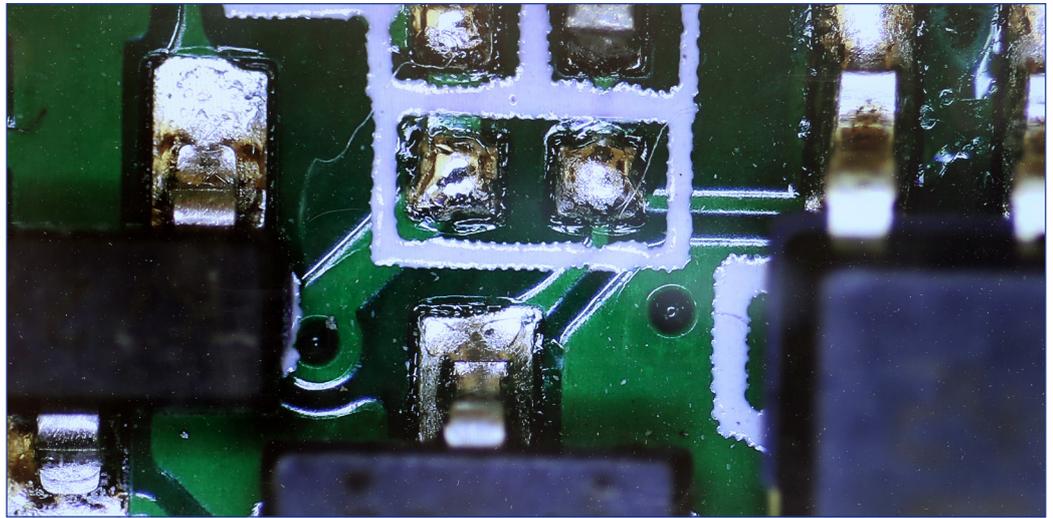


IS-01 - Straight View Zoom Factor

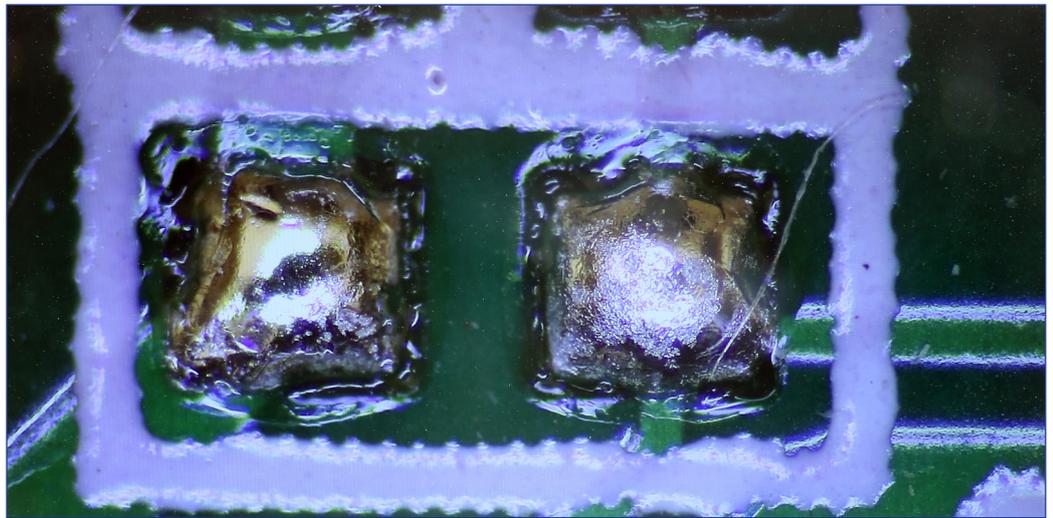
Straight View 0.7X



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

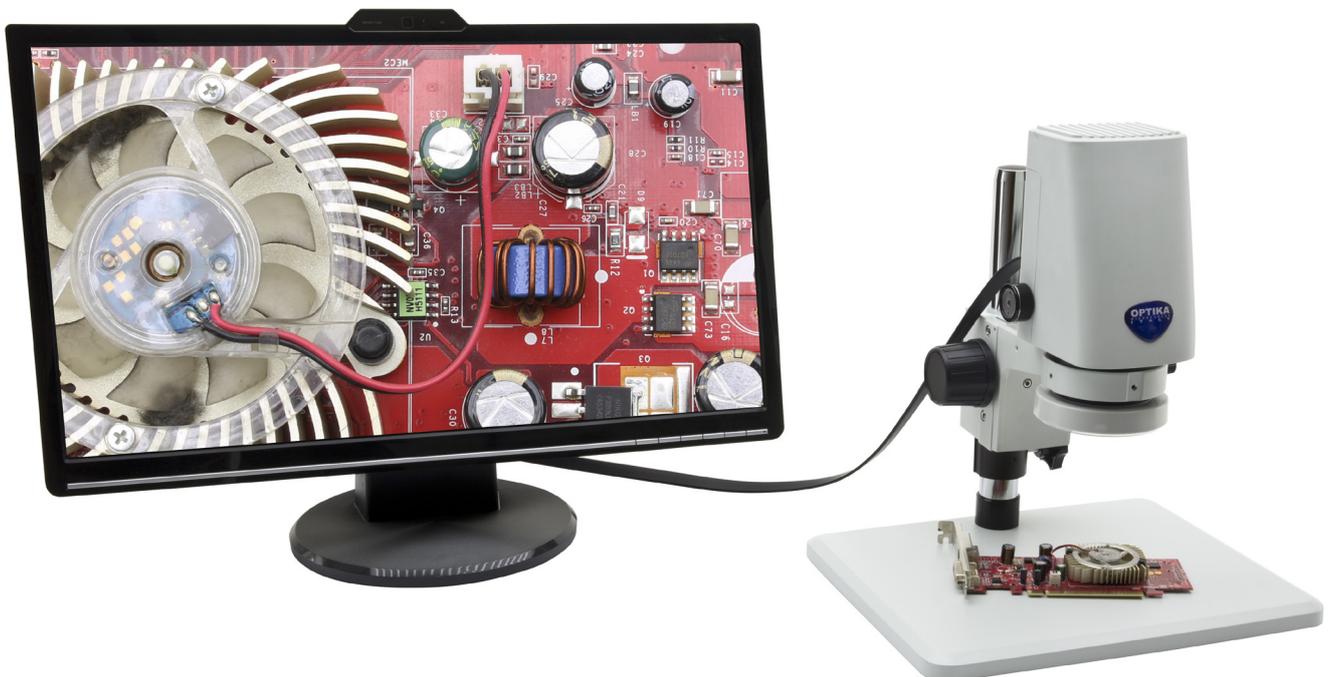
IS-01/IS-01SMD Digital Head

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



IS-4K2 - Overview

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

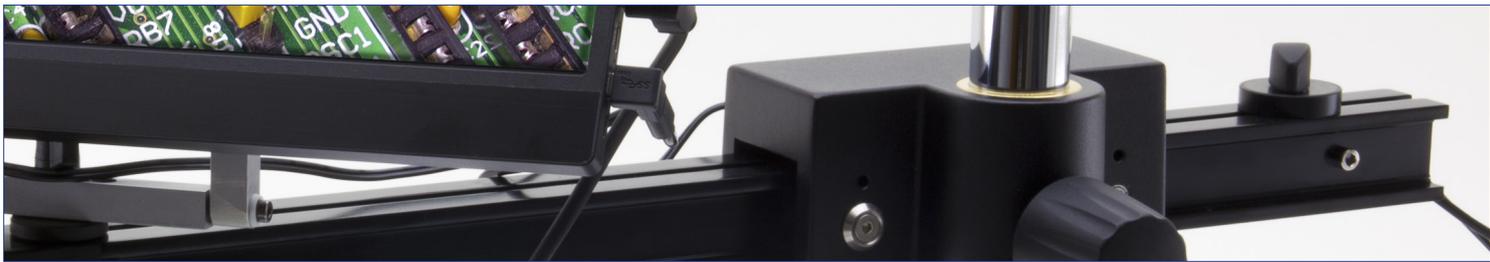
IS-4K2 includes the **real-time full HD auto-focus camera** with **relevant zooming capabilities** (optical zoom is 1x...18x).

Crystal clear 4K live view is shown through a large HD monitor, with incredibly fast connection (30 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.



IS-4K2 - Technical Specifications



HDMI MONITOR

Type LCD screen 360° rotating, freely inclinable for ergonomic vision

Size 15.6"

Power supply 5V / 4A

CAMERA

HDMI camera resolution (MP) 8

Camera resolution (n° of pixels: W x H) 3840x2160

HDMI signal output Yes

WiFi signal output Yes

Sensor size 1/2.8"

Sensor technology CMOS

Sensor type SONY STARVIS

Optical zoom 1x-18x

Rolling shutter Yes

Autofocus Yes

Image format 16/9

Pixel size (mm) 1.45x1.45

Frame rate full resolution (fps) 30@3840x2160

Camera power 12V / 3A

Dimensions (mm) 80 x 80 x 116

Weight (Kg) 0,68

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: LED ringlight, HDMI cable (0,3m), Wireless Mouse, SD card and WiFi Adapter.

On-board controls and cross grid

No need to constantly re-adjust the lens focus

1/2.8" CMOS 8MP camera with powerful 1x-18x

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

Variable working distance from 160 to 250mm.

By using a standard W.D. of 160-255 mm the camera can be calibrated and used for linear measurement regardless the zoom factor used. The system automatically "knows" the current zoom factor and performs the correct

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

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

Wireless mouse and SD card are included



IS-4K3 - Overview

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

IS-4K3 includes the **real-time full HD auto-focus camera** with **relevant zooming capabilities** (optical zoom is 1x...18x).

Crystal clear 4K live view is shown through a large HD monitor, with **incredibly fast connection** (30 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**.

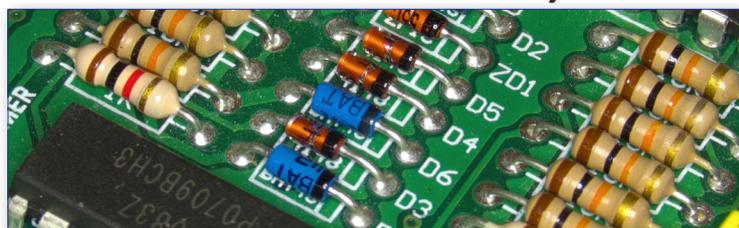
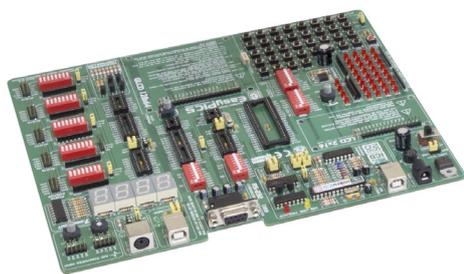
All functions are controlled directly from the screen via a wireless mouse.

Images and videos can be saved on the SD card and easily transferred on any device.

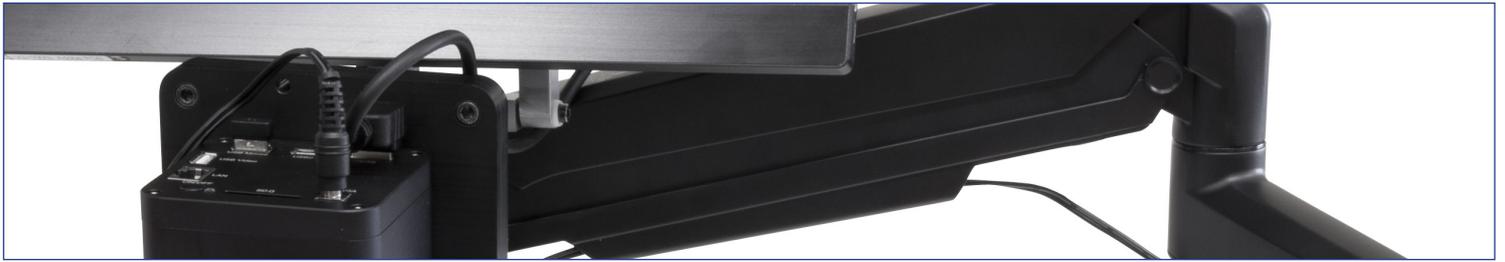
The system is completed by the **table clamping SZ-STL5 highly versatile flexible arm stand**, 360° rotating, ideal for high and large samples and on every bench thanks to its compact footprint, saving valuable space on the bench.



Reduce inspection time with real-time focus from any angle



IS-4K3 - Technical Specifications



HDMI MONITOR

Type	LCD screen 360° rotating, freely inclinable for ergonomic vision
Size	15.6"
Power supply	5V / 4A
CAMERA	
HDMI camera resolution (MP)	8
Camera resolution (n° of pixels: W x H)	3840x2160
HDMI signal output	Yes
WiFi signal output	Yes
Sensor size	1/2.8"
Sensor technology	CMOS
Sensor type	SONY STARVIS
Optical zoom	1x-18x
Rolling shutter	Yes
Autofocus	Yes
Image format	16/9
Pixel size (mm)	1.45x1.45
Frame rate full resolution (fps)	30@3840x2160
Camera power	12V / 3A
Dimensions (mm)	80 x 80 x 116
Weight (Kg)	0,68

STAND

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

ACCESSORIES

Accessories Included:	LED ringlight, HDMI cable (0,3m), Wireless Mouse, SD card and WiFi Adapter.
-----------------------	---

No need to constantly re-adjust the lens focus



1/2.8" CMOS 8MP camera with **powerful 1x-18x optical zoom**

On-board controls and cross grid

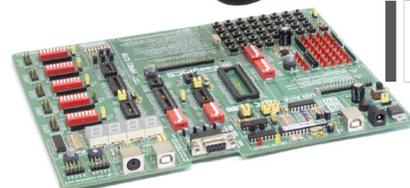
Sensor's main features are the **high sensitivity** and **incredible color fidelity**: save money (no need of external illuminators or ring lights)

Small footprint to save valuable space on the bench; table



Freely orientable arm and joint

Wireless mouse and SD card are included



Headquarters and Manufacturing Facilities

OPTIKA® S.r.l. Via Rigla, 30 - 24010 Ponteranica (BG) - ITALY - Tel.: +39 035.571.392 - info@optikamicroscopes.com

Optika Sales branches

OPTIKA® Spain spain@optikamicroscopes.com
OPTIKA® China china@optikamicroscopes.com
OPTIKA® India india@optikamicroscopes.com

OPTIKA® North America north@optikamicroscopes.com
OPTIKA® Central America central@optikamicroscopes.com
OPTIKA® Africa africa@optikamicroscopes.com