From Eye to Insight

Leica
MICROSYSTEMS

OPTIMIZE YOUR WORKFLOW IN INSPECTION & REWORK

S9 i, S9 D, and S9 E stereo microscopes

DEVELOPED TO BOOST EFFICIENCY

OPTIMIZE YOUR WORKFLOW

Work up to 20% faster with S9 series stereo microscopes*

Continuously improving production, keeping defect rates low, and fulfilling customer requests in order to stay competitive can be very challenging. Leica has developed the S9 stereo microscope series to help you cope with these challenges.

The microscopes feature outstanding optical quality and FusionOptics technology for a three times greater depth of field. With a larger area in sharp focus, operators can immediately identify defects with fewer time-consuming microscope adjustments.

Eliminate extra steps in your workflow …

Locate area of interest ▶ Take time to focus and zoom-in to see the details ▶ Go deeper, refocus and zoom-in again ▶ Access the sample for reworks ▶ Document and transfer the results

Example of a standard workflow in stereo microscope inspections*

… boost efficiency with the S9 series and save up to 20% of your time*

Large field of view – find area of interest fast ▶ FusionOptics – see details 12 mm top down fully in focus with high resolution ▶ Large working distance – fast and easy sample manipulation ▶ Instant image sharing – fast, digital documentation

Up to 20% less time!

* compared to the S6 standard industrial stereo microscope from Leica

EVERYTHING AT A GLANCE

See details faster to locate issues

No refocusing is needed to see all details within a height of up to 12 mm sharply in focus. The unique FusionOptics technology from Leica overcomes optical limitations. Operators will experience a more natural viewing perception, allowing them to work more efficiently.

Shift quickly from overview to detail

The S series offers high magnification of up to 55x in combination with a large 9:1 zoom range. This limits workflow interruptions from microscope adjustments and enables operators to inspect parts of different sizes more quickly.

FusionOptics technology from Leica

Conventional stereo microscopes have two identical beam paths that reveal a spatial impression of the sample. FusionOptics technology takes advantage of a neurological phenomenon: the microscope's **left beam path shows** an image with **great depth of field,** while the **right beam path** shows an image with **high resolution.** The human **brain** then effortlessly **combines the information from both channels into one image.** This results in an image perception with high resolution and a great depth of field at the same time – an unparalleled Leica standard in stereo microscopy.

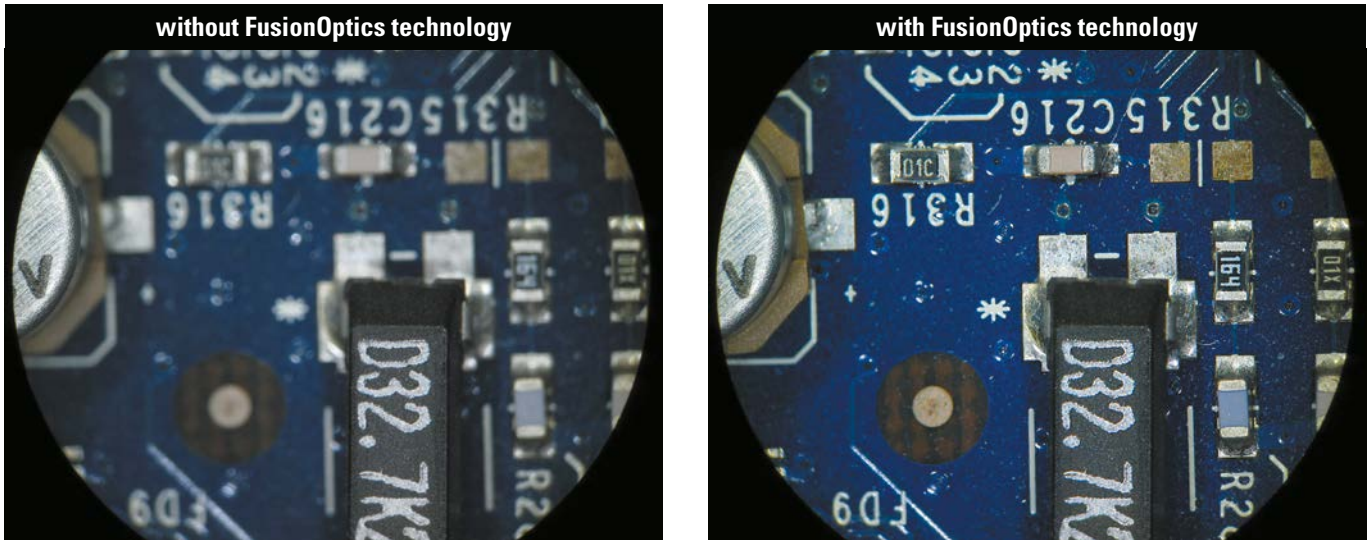
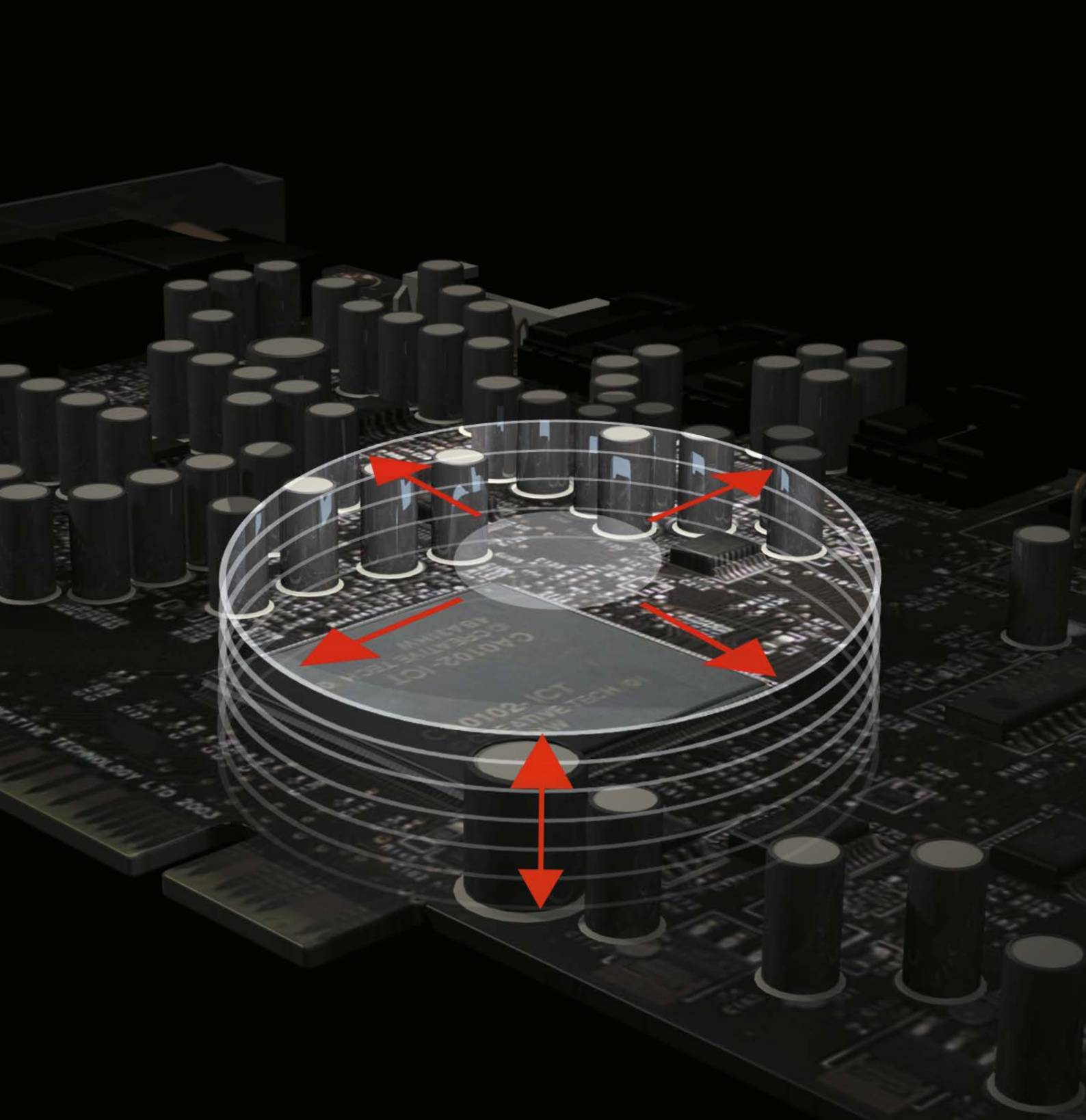
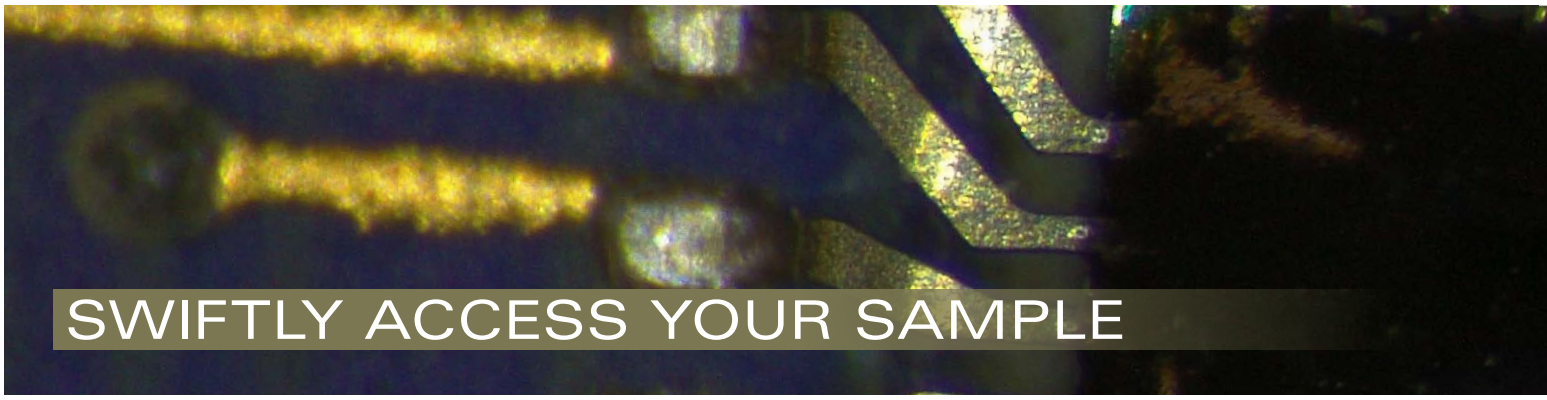


Image simulation, showing a printed circuit board sample without and with the FusionOptics effect, perceived when looking through the oculars.



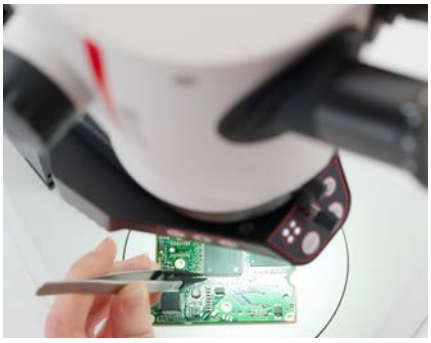
3D VIEW WITH
12 MM DEPTH OF FIELD
37.7 MM OBJECT FIELD

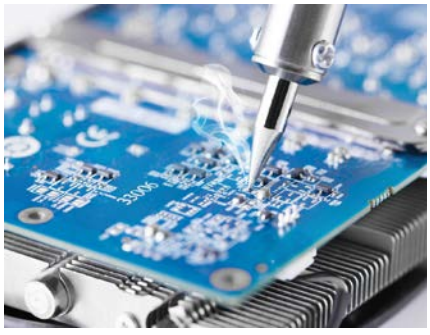


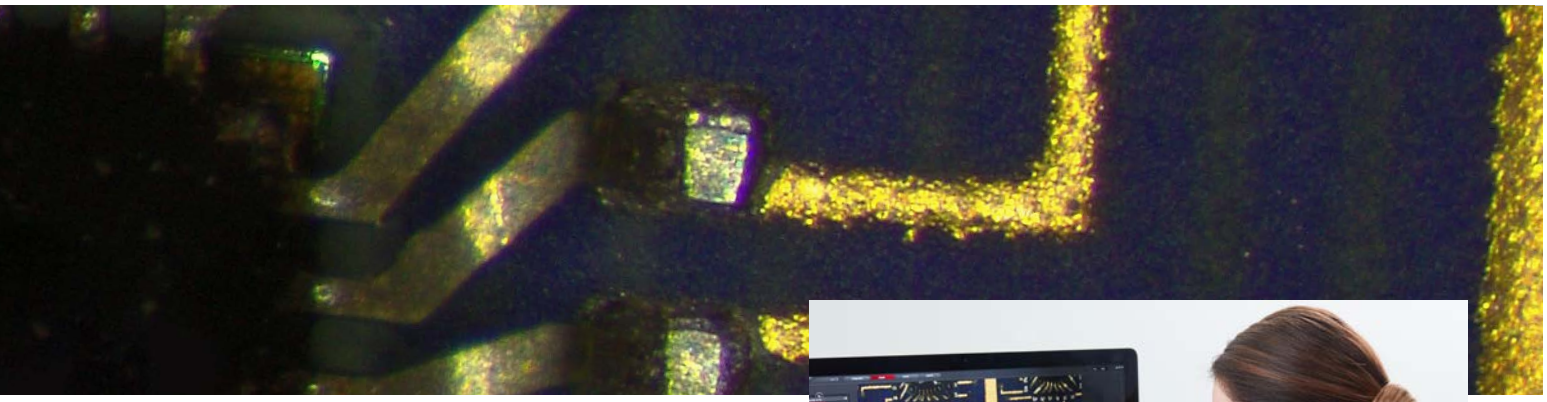
SWIFTLY ACCESS YOUR SAMPLE

Maximum working distance for maximum speed

Sample inspection and manipulation under the microscope can be conveniently performed thanks to the 122 mm working distance of all S9 stereo microscopes. Enjoy working with more space for your tools under the microscope lens – sometimes every mm counts. Operators can access the sample with ease when using standardized tweezers or other manipulation tools.







Customize it and make it yours

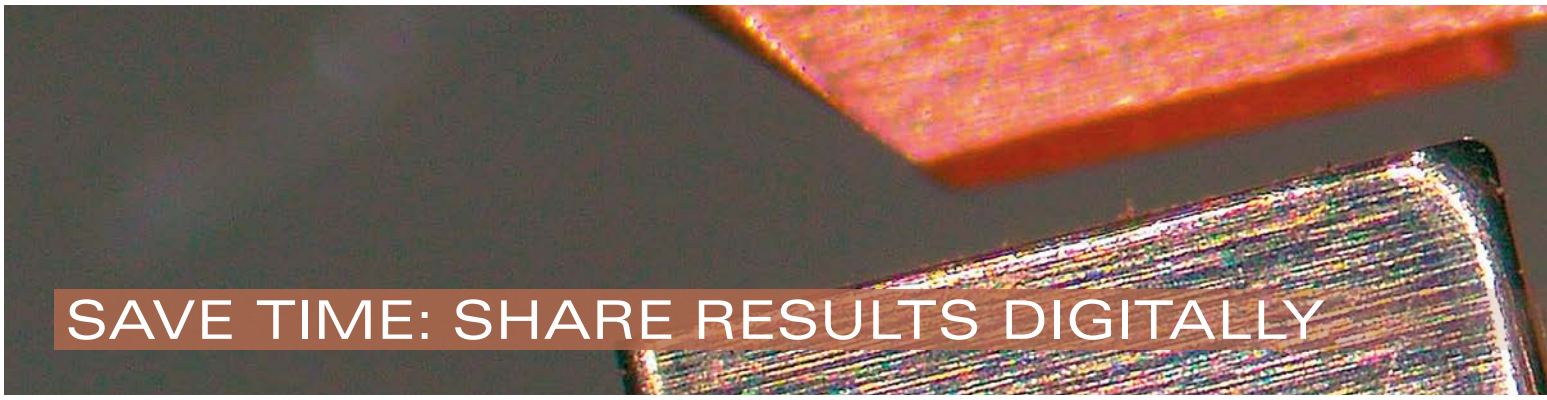
In combination with different stands the S9 microscopes can be turned into customized workstations. This helps you to increase efficiency and the quality of your work results. The 35° viewing angle of the microscope allows a natural head posture and helps to prevent operator fatigue. For recurring tasks the switchable zoom click-stops assure reproducible and reliable results from operator to operator.

S9 stereo microscopes are ideally suited for production and inspection tasks for a variety of samples. The swingarm and flexarm offer even greater flexibility for different application areas, such as:

- Electronic parts
- Precision mechanics
- Automotive engineering
- Plastic parts
- Forensic investigations
- Medical device manufacturing
- Specimen dissection & preparation in life sciences

Swingarm stand for ergonomic working conditions

Flexarm stand for large samples



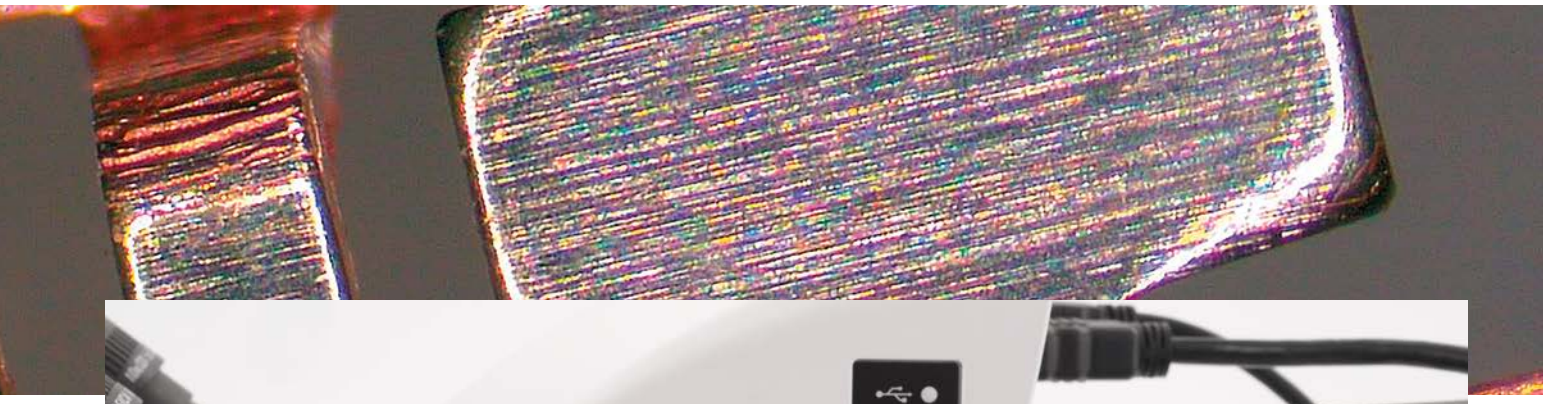
SAVE TIME: SHARE RESULTS DIGITALLY

Instant sharing for instant feedback

The S9 i stereo microscope with integrated 10 MP camera enables you to view images digitally at up to 35 frames per second on a PC, HD-monitor, or mobile device. This allows you to quickly and easily react to queries, get a second opinion, and discuss problems with colleagues. To work with mobile devices download the AirLab App from iTunes or the Google Play Store. For Apple Mac download Acquire.

Manage your images with ease

Inspect, analyze, and organize your images with the LAS X software from Leica. This latest software platform enables straightforward imaging and documentation, available for industrial and life science applications. It supports operators to deliver reliable results with confidence. LAS X also offers a range of additional software modules and expert solutions for specific applications.



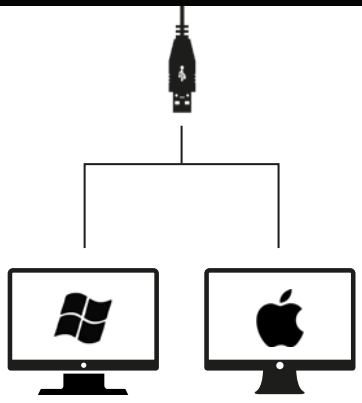
Connectivity options of the S9 i with integrated camera

Use **USB mode** to connect the camera directly with a **PC** or Mac **via USB2** cable.

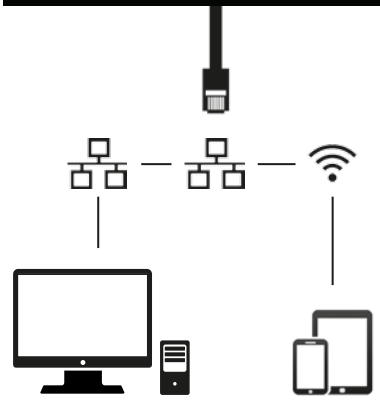
Use **Ethernet mode** to connect the camera **with your facility's network** via Ethernet (RJ45) cable.

Use **HDMI mode** to connect the camera to a large HD-monitor for a **standalone operation** without computer.

USB mode



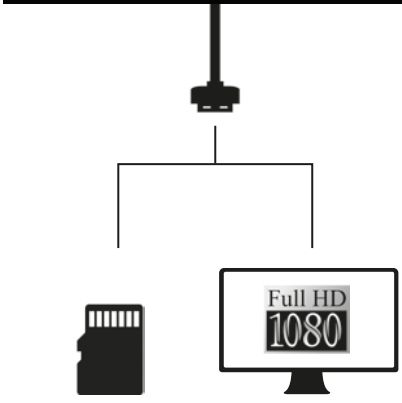
Ethernet mode



Capture images from any remote PC or Mac with access to your LAN network.

Mobile devices can also be used, if they have access to your network ia Wi-Fi.

HDMI mode



THE S9 SERIES

Viewing only

Inspect, observe, or manipulate your sample exclusively through the eyepieces. The **S9 E** provides a cost effective solution with fast return on investment if you don't need to document with your microscope.

Sharing digitally

Share, document, and report results quickly and reliably. The integrated 10 MP CMOS camera of the **S9 i** can live-stream images via USB, HDMI or Ethernet connection to your PC, HD-monitor, or mobile device.

Documentation ready

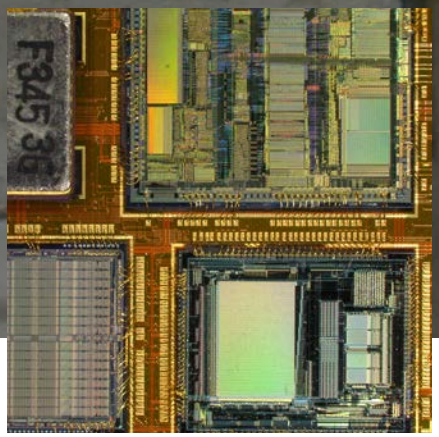
Stay flexible – add a camera to the **S9 D** for documentation and sharing at any time. Observe your sample through the eyepieces and capture images simultaneously.

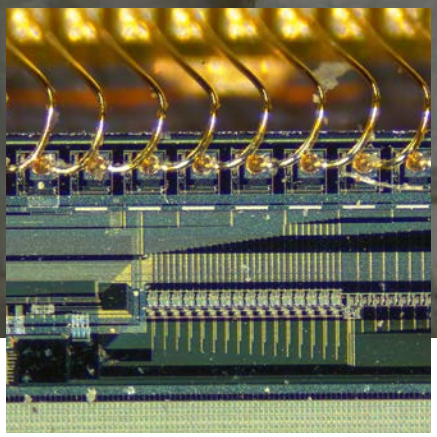
FUSIONOPTICS

122 MM WORKING DISTANCE

55x MAGNIFICATION

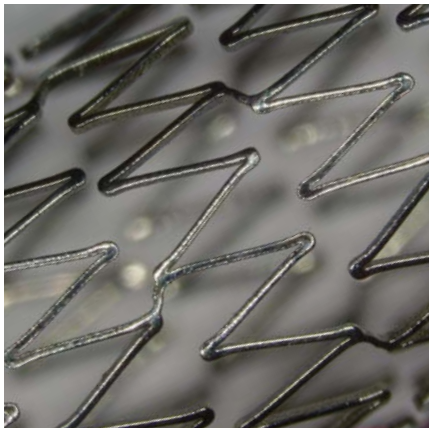
37.7 MM OBJECT FIELD



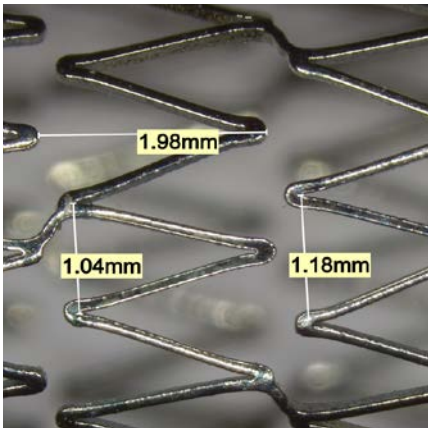


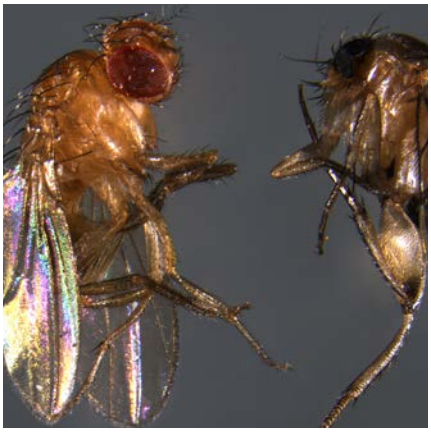
Prepare for the ongoing miniaturization trend in Electronics with 55x magnification and 9:1 zoom range to quickly change from overview to detail.

Put your Automotive sample in the right light with a wide range of illumination accessories to reveal defects.



Document results reliably in Medical Device Manufacturing with the integrated camera and software for annotations, measurements, and reports.





Sort and screen model organisms easily in Life Science Applications with the large working distance of 122 mm.

SPECIFICATIONS

	S9 E	S9 D	S9 i
Optical system, lead-free	10° Greenough using best-corrected central part of the objective; complete apochromatically corrected microscope system		
Zoom	9:1, apochromatic		
Viewing angle	35°		
ESD protection	Antistatic		
Specific surface resistivity	2×10^{11} Ω / square, discharge time < 2 seconds from 1,000 V to 100 V		
Magnification range (basic outfit)	6.1 x – 55 x		
Maximum resolution	500 lp / mm		
Maximum numerical aperture	0.167		
Working distance (basic outfit)	122 mm		
Object field diameter	37.7 mm		
Adjustable zoom limits	Click-stops 10 x, 20 x, 30 x, 40 x, and 50 x		
Video/photo outlet, switchable	–	50 % video 50 % visual, permanent	–
Integrated camera	–	–	10 MP resolution Live image up to 35 fps (1,024 x 768 pixels) Sensor size 6.44 mm x 4.6 mm, 1/2.3" CMOS Pixel size 1.67 µm x 1.67 µm
Standard objectives, lead-free	Apochromats 0.5 x, 0.63 x, 0.75 x, 1.6 x, 2.0 x		
Ergonomic eyepieces, fixed and adjustable, with cups	10 x / 23, 16 x / 16, 20 x / 12		
Ergonomic eyepieces for eyeglass wearers, adjustable, with eyecups	10 x / 23, 16 x / 15, 25 x / 9.5, 40 x / 6		
Interpupillary distance	50 – 76 mm		

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