

datasheet

# SCALEREO

autostereoscopic stereo 3D video microscope system




FEATURE	AddOn	Desk
<b>SYSTEM related</b>		
Description	3D video extension kit with <b>3D camera add-on</b> module to upgrade existing optical microscopes (e.g. Leica M-Series, not included) to become an autostereoscopic stereo 3D video microscope system	Complete autostereoscopic 3D video microscope system, including a height adjustable <b>desk microscope unit</b> with integrated stereo camera unit and flexible lighting system
System components	AddOn Module Display / Tracking Unit (incl. table stand) Signal Processing Unit System ControlBar	Desk Microscope Unit Display / Tracking Unit (incl. table stand) Signal Processing Unit System ControlBar
Optional available accessories	-	wireless foot pedal (to control zoom/focus/photo & video documentation)
Compatible microscopes	<b>Leica</b> M / MZ series, .... <b>Olympus</b> SZX series,.... <b>Zeiss</b> Discovery Line,....  AddOn module either <ul style="list-style-type: none"> <li>as replacement for original tube, or</li> <li>optionally: placed between microscope and original tube</li> </ul>	N/A (fully independent microscope system)
Documentation features	<ul style="list-style-type: none"> <li>digital photo record (2D) with timestamp</li> <li>digital video record (Stereo 3D) with timestamp</li> <li>transfer of records to USB stick</li> </ul>	
System control	flexible ControlBar to control <ul style="list-style-type: none"> <li>headtracking modes</li> <li>documentation features</li> </ul>	flexible ControlBar to control <ul style="list-style-type: none"> <li>lighting system</li> <li>zoom / focus</li> <li>headtracking modes</li> <li>documentation features</li> </ul>



FEATURE	AddOn	Desk
<b>CAMERA related</b>		
Working distance (camera to area of work)	N/A (depending on optical microscope specs)	200mm - 300mm continuous height adjustable camera head for individual heights of goods to be inspected
Field of vision (camera to area of work)	N/A (depending on optical microscope specs)	14mm - 250mm
Magnification	N/A (depending on optical microscope specs)	Continuous up to 20x (10 x optical + 2 x digital)  Representation on 13" display: continuously scale from factor 1,5 - 25
Focus adjustments	N/A (depending on optical microscope specs)	<ul style="list-style-type: none"> <li>autofocus</li> <li>manual focus (setting focus plane up / down)</li> </ul>
Depth of field	N/A (depending on optical microscope specs)	3mm – 20mm (depending on magnification & aperture setting)
Resolution	N/A (depending on optical microscope specs)	25Lp/mm (=> 20µm single line thickness / not line pair)
Lightning system	N/A (depending on optical microscope specs)	highly flexible LED lighting system <ul style="list-style-type: none"> <li>Coaxial + multi-segment ring light</li> <li>7 different lighting modes</li> <li>Color temperature: 5700K</li> <li>Color rendering index CRI: 90</li> <li>Up to 40.000 lux</li> <li>PWM dimming range 3-100%</li> </ul> additional: adjustable camera gain
Video latency (working area to user´s eyes)	< 80ms	
<b>DISPLAY related</b>		
LCD display	<ul style="list-style-type: none"> <li>13,3" diagonal (294mm x 165mm active area)</li> <li>3840 x 2160 resolution (4K)</li> <li>Pixel density &gt; 330 ppi</li> <li>AR (antireflective) coated 2mm glass surface</li> <li>Multiple adjustable table stand:               <ul style="list-style-type: none"> <li>Height: 210mm (center of display: 165mm – 375mm)</li> <li>Tilt / Swivel</li> </ul> </li> </ul>	
Glasses-free 3D visualization	<ul style="list-style-type: none"> <li>3D Global® autostereoscopic 3D display with sandwich filter technology (covered by multiple patents)</li> <li>3D Global® headtracking system for one single user               <ul style="list-style-type: none"> <li>InfraRed ToF-Camera based user detection</li> <li>High-speed user tracking</li> <li>up to 4 different tracking modes (OFF / STEADY / CATCH / FREEZE)</li> </ul> </li> <li>Usable by multiple users simultaneously, when headtracking is OFF</li> </ul>	
Viewing Distance (VD)	approx. 55 – 80 cm / (ideal: 65cm)	
horizontal Viewing Angle (VA)	approx. ± 22,5°	



<b>GENERAL</b>		
Power supply	Integrated power supply 100 – 240VAC 50 – 60Hz max. 120W	
Power consumption	75 W (typ.)	100 W (typ.)
Ambient temperature for storage	0 – 40°C	
Ambient temperature for operation	10 – 40°C	
length of system cables	all approx. 2m (see "details section" below)	
System weight (net w/o packaging)	approx. 14kg	approx. 24kg
Package data (L x W x H)	1 box  BOX1: 600 x 400 x 400 mm (1/4 euro pallet)  gross weight: BOX1: approx. 18kg	2 boxes  BOX1: 600 x 400 x 400 mm (1/4 euro pallet) BOX2: 800 x 400 x 400 mm (1/3 euro pallet)  gross weight: BOX1: approx. 17kg BOX2: approx. 15kg
approvals / certifications	 declaration of conformity for entire system	
<b>3D Global Solutions article numbers</b>	<b>36-0004</b> "SCALEREO-AddOn_13B01C" <i>with original tube connector,</i> <i>e.g. for Leica M / MZ series</i>  <b>36-0012</b> "SCALEREO-AddOn_13B04C" <i>without original tube connector,</i> <i>e.g. for Leica M / MZ series</i>  <b>36-0010</b> "SCALEREO-AddOn_13B02C" <i>without original tube connector,</i> <i>e.g. for Olympus SZX series</i>  <b>36-0011</b> "SCALEREO-AddOn_13B03C" <i>with original tube connector,</i> <i>e.g. for ZEISS Discovery Line</i>  <b>36-0013</b> "SCALEREO-AddOn_13B05C" <i>without original tube connector,</i> <i>e.g. for ZEISS Discovery Line</i>	<b>36-0003</b> "SCALEREO-Desk_13B01C"



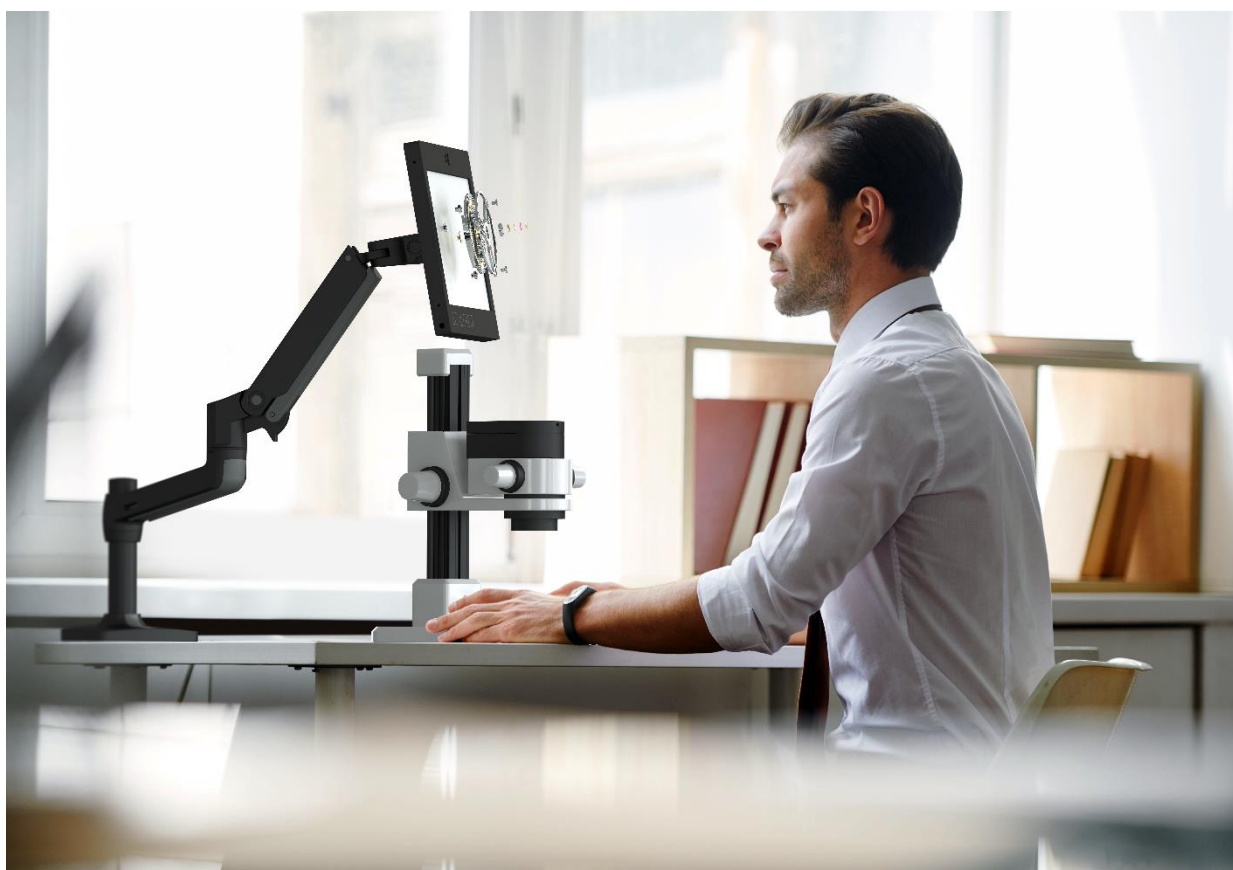
Signal Processing Unit details	AddOn	Desk
Outer dimensions (DxWxH) <small>(w/o cable)</small>	320 x 348 x 108mm	
Weight <small>(w/o cable)</small>	approx. 6,1 kg	
Cable length	Power Cord: approx. 1,5m	
Connectors	backside: <ul style="list-style-type: none"> <li>• Camera (microscope unit / add-on)</li> <li>• Display</li> <li>• ControlBar</li> <li>• Power</li> </ul> front: <ul style="list-style-type: none"> <li>• 2 x USB for USB-stick <small>for documentation records transfer</small></li> </ul>	
Housing color	Black (anodized)	
Material	Aluminum	
Package	Packed in BOX1	
System Control Bar details	AddOn	Desk
Outer dimensions (DxWxH) <small>(w/o cable)</small>	60 x 270 x 30mm	
Weight <small>(w/o cable)</small>	approx. 0,4 kg	
Cable length	approx. 2m	
Cable outlet	right-hand / plugable (USB B)	
Housing color	Black (anodized)	
Material	Aluminum / plastic buttons	
Package	Packed in BOX1	



Display / Tracking Unit details	AddOn	Desk
Outer dimensions (DxWxH) <small>(w/o cable and w/o stand)</small>	25 x 330 x 235mm	
Weight <small>(w/o cable and w/o stand)</small>	approx. 2,1kg	
Mounting	VESA 75 / VESA 100	
Cable length	approx. 2m	
Cable outlet	backside (fixed)	
Housing color	Black (anodized)	
Material	Aluminum (milled)	
Package	Packed in BOX1	
Display Table Stand details	AddOn	Desk
Outer dimensions (DxWxH)	approx. 380 x 250 x 220-430mm	
Weight <small>(w/o cable)</small>	approx. 3,2kg	
Mounting	VESA 75 / VESA 100	
Adjustments	<ul style="list-style-type: none"> <li>• height: by 210mm</li> <li>• display tilt (forward/backward): -70° / +89°</li> <li>• display swivel (lateral): +/-89°</li> </ul>	
Housing color	Black	
Material	Metal / plastic	
Package	Packed in BOX1	
AddOn Module details	AddOn	Desk
Outer dimensions (DxWxH) <small>(w/o cable)</small>	120 x 74 x 47mm	N/A
Weight <small>(w/o cable)</small>	approx. 0,9 kg	N/A
Cable length	approx. 2m	N/A
Cable outlet	backside (fixed)	N/A
Housing color	Black (anodized)	N/A
Material	Aluminum (milled)	N/A
Package	Packed in BOX1	N/A



Desk Microscope Unit details	AddOn	Desk
Outer dimensions (DxWxH) <small>(w/o cable)</small>	N/A	348 x 280 x 625mm
Weight <small>(w/o cable)</small>	N/A	approx. 9,8 kg
height adjustment range <small>(w/o cable)</small>	N/A	170mm 255 – 425mm for bottom surface of camera / lightning platform
Cable length	N/A	approx. 2m
Cable outlet	N/A	left-hand central at lower backside of camera / lightning platform (fixed)
Housing color	N/A	Black
Material	N/A	Aluminum / Steel
Package	N/A	Packed in BOX2



*symbolic image "AddOn"*