

datasheet

# SCALEREO

autostereoscopic stereo 3D video microscope system




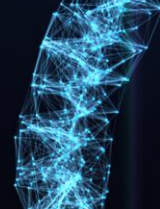
| FEATURE                        | AddOn   | Desk   |
|--------------------------------|---|--|
| <b>SYSTEM related</b>          |   |  |
| Description                    | 3D video extension kit with <b>3D camera add-on</b> module to upgrade existing optical microscopes (e.g. Leica M-Series, not included) 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<br>Display / Tracking Unit (incl. table stand)<br>Signal Processing Unit<br>System ControlBar  | Desk Microscope Unit<br>Display / Tracking Unit (incl. table stand)<br>Signal Processing Unit<br>System ControlBar   |
| Optional available accessories | -   | wireless foot pedal<br>(to control zoom/focus/photo & video documentation)   |
| Compatible microscopes         | <b>Leica</b> M / MZ series, ....<br><b>Olympus</b> SZX series,....<br><b>Zeiss</b> Discovery Line,....<br><br>AddOn module either <ul style="list-style-type: none"> <li>as replacement for original tube, or</li> <li>optionally:<br/>placed between microscope and original tube</li> </ul> | N/A<br>(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> |



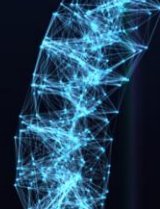
| FEATURE  | AddOn  | Desk   |
|--|--|--|
| <b>CAMERA related</b>                          |  |  |
| Working distance<br>(camera to area of work)   | N/A<br>(depending on optical microscope specs)   | 200mm - 300mm<br>continuous height adjustable camera head for individual heights of goods to be inspected  |
| Field of vision<br>(camera to area of work)    | N/A<br>(depending on optical microscope specs)   | 14mm - 250mm   |
| Magnification                                  | N/A<br>(depending on optical microscope specs)   | Continuous up to 20x<br>(10 x optical + 2 x digital)<br><br>Representation on 13" display:<br>continuously scale from factor 1,5 - 25  |
| Focus adjustments                              | N/A<br>(depending on optical microscope specs)   | <ul style="list-style-type: none"> <li>autofocus</li> <li>manual focus<br/>(setting focus plane up / down)</li> </ul>  |
| Depth of field                                 | N/A<br>(depending on optical microscope specs)   | 3mm – 20mm<br>(depending on magnification & aperture setting)  |
| Resolution                                     | N/A<br>(depending on optical microscope specs)   | 25Lp/mm<br>(=> 20µm single line thickness / not line pair)   |
| Lightning system                               | N/A<br>(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<br>(working area to user´s eyes) | ~100ms   |  |
| <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<br/>(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 / FINE / COARSE / FORCED2D)</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. ± 27,5°  |  |



| <b>GENERAL</b>                             |   |  |
|--|---|--|
| Power supply                               | Integrated power supply<br>100 – 240VAC<br>50 – 60Hz<br>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<br>(see "details section" below)   |  |
| System weight<br>(net w/o packaging)       | approx. 14kg  | approx. 24kg   |
| Package data<br>(L x W x H)                | 1 box<br><br>BOX1: 600 x 400 x 400 mm (1/4 euro pallet)<br><br>gross weight:<br>BOX1: approx. 18kg  | 2 boxes<br><br>BOX1: 600 x 400 x 400 mm (1/4 euro pallet)<br>BOX2: 800 x 400 x 400 mm (1/3 euro pallet)<br><br>gross weight:<br>BOX1: approx. 17kg<br>BOX2: approx. 15kg |
| approvals / certifications                 | <br>declaration of conformity for entire system  |  |
| <b>3D Global Solutions article numbers</b> | <b>36-0004 (36-0021)</b><br>"SCALEREO-AddOn_13B01C(e)"<br><i>with original tube connector,</i><br><i>e.g. for Leica M / MZ series</i><br><br><b>36-0012 (36-0018)</b><br>"SCALEREO-AddOn_13B04C(e)"<br><i>without original tube connector,</i><br><i>e.g. for Leica M / MZ series</i><br><br><b>36-0010 (36-0016)</b><br>"SCALEREO-AddOn_13B02C(e)"<br><i>without original tube connector,</i><br><i>e.g. for Olympus SZX series</i><br><br><b>36-0011 (36-0017)</b><br>"SCALEREO-AddOn_13B03C(e)"<br><i>with original tube connector,</i><br><i>e.g. for ZEISS Discovery Line</i><br><br><b>36-0013 (36-0019)</b><br>"SCALEREO-AddOn_13B05C(e)"<br><i>without original tube connector,</i><br><i>e.g. for ZEISS Discovery Line</i> | <b>36-0003 (36-0015)</b><br>"SCALEREO-Desk_13B01C(e)"  |



| Signal Processing Unit details                         | AddOn  | Desk |
|--|--|------|
| Outer dimensions (DxWxH)<br><small>(w/o cable)</small> | 320 x 348 x 108mm  |      |
| Weight<br><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<br/><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)<br><small>(w/o cable)</small> | 60 x 270 x 30mm  |      |
| Weight<br><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)<br><small>(w/o cable and w/o stand)</small> | 25 x 330 x 235mm   |      |
| Weight<br><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<br><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)<br><small>(w/o cable)</small>               | 120 x 74 x 47mm  | N/A  |
| Weight<br><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)<br><small>(w/o cable)</small> | N/A   | 348 x 280 x 625mm  |
| Weight<br><small>(w/o cable)</small>                   | N/A   | approx. 9,8 kg   |
| height adjustment range<br><small>(w/o cable)</small>  | N/A   | 170mm<br>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"*