



Semorr Naked Eye 3D Microscope

Product
Brochure

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IMMERSIVE AND VISIBLE

📌 Semorr Naked Eye 3D Microscope

- 3D image without eyepieces, easy to operate
- 57mm depth of field under 20X magnification
- Teaching and Dentist-patient communication schemes with 3D image

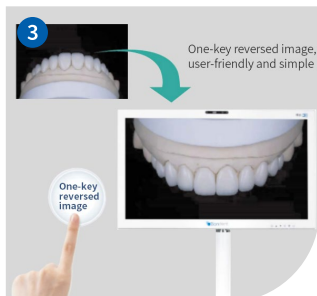


Semorr Medical Tech specializes in designing, manufacturing and promoting surgical microscope with HD imaging system in dentistry. Whether you are in endodontics, periodontics, or restorative dental profession, Semorr offers microscope solutions ideal for your practice.

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PRODUCT ADVANTAGE



1 Large vario focus objective lens 180mm-460mm

- 4 times depth of field and magnifying power compared to traditional microscopes.

2 Dual-screen dual-display surgery system, Dentist-patient communication module

- Multiple screens can satisfy clinical, teaching and assistant medical solutions.
- Ensure surgeon's 3D display and normal operation, external 2D/3D screens are used for teaching and exchange & communication between Dentist and assistant.
- Externally connected to glasses-free 3D screen, used for Dentist-patient communication, facilitate faster transaction.

3 Adjuvant therapy reverse telescope system

- Optical signal is converted into digital signal, 3D images are reversed to turn mandibular treatment to maxillary treatment and reduce the operation difficulty of clinicians under the reflection of the stomatoscope.

4 Human eye location and tracking technology

- Automatically identify 3D images within 3 seconds, track images without delaying and joggle, 3840*2160 HD 3D imaging system realizes 3D images clearly and naturally.
- Lower requirements for position and space, optimal 3D images can be acquired adaptively.

Technical parameters of Semorr Naked Eye 3D Microscope

Technical requirements

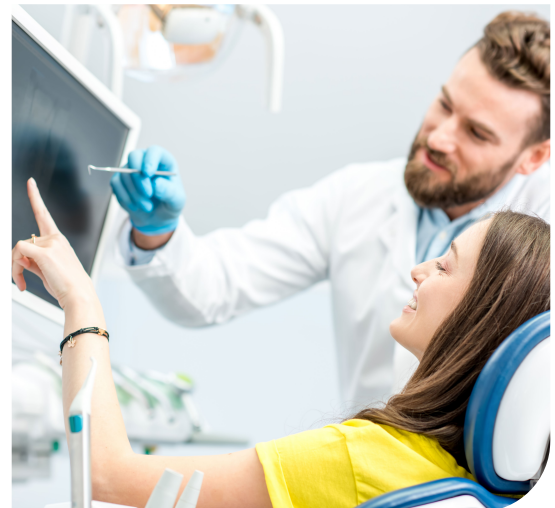
Optical system		
Zoom magnifications(F250mm): 3.6X-23.3X		
PD adjustable range:55mm~75mm		
Diopter range: +_7D		
Objective lens: WD180-460mm		
Diameter of FOV: 9.8mm-62.5mm		
Zoom factor: 0.45x~2.91x		
Illumination system		
Light source: Built-in high-reliability medical LED light source, with continuously adjustable luminance.		
Minimum illuminance of object surface (f=250mm): ≥50,000lx		
Spot diameter: ≥60mm		
Color temperature: 5500K, closer to natural light and colors		
Color rendering index (Ra): ≥85		
Color filter: Two or more types of filter modes: Orange: to prevent premature setting of composites and other light-cured resin materials; Green: to allow clearer image of blood-soaked operating fields, such as during implant procedures		
Support system		
Maximum arm spread: 1390mm; turning radius of cross arm: 460mm, 360° rotation; spring arm: 700mm, ±160° rotation, vertical displacement ±315mm;		
Base size: 516mm×516mm, which reduces consulting room space occupancy		
The support is protected with antibacterial nano silver ion coating to ensure no cross contamination		
Built-in UHD camera system		
Video definition: 3840×2160 (4K, switchable to 2.7K, 1440P, 1080P, 960P and 720P)		
Video frame rate: 25fps@4K		
Storage medium: External USB flash disk		
Playback function: Timely play back videos and picture files through camera module		
3D image module		
Video definition: 4K, 1080P, 960P, 720P		
Frame rate: 60fps@1080P (recommended), available for 30fps@4K output		
Output channel: Two-way		
Output interface: Two-way micro HDMI		
Image sensor: Sony high-end image sensor (x2)		
Glasses-free 3D surgical intelligent display system		
Image performance:		
01. Display screen size: 28in	07. Aspect ratio: 16:9	13. HDMI input: HDMI 2.0×2/available for 4K@60Hz
02. Effective image size: 648.9mm (H)*369.3mm (V)	08. Color depth: 10bit	
03. Screen definition: 3840*2160	09. Color: Appox 1.073 billion colors	
04. Pixel pitch: 0.16*0.16mm	10. Color gamut: 72%NTSC	
05. Contrast ratio: 1000:1 (typical)	11. Backlight: LED	
06. Luminance: 3000cd/m2 (typical)	12. Visual angle: 85°/85°/80°/80° (typical)	
Glasses-free 3D parameters:		
01. Input voltage: 220V 50Hz	04. Operating temperature: 0-35 C	07. Storage humidity: 10%-90%, no condensation
02. Maximum power: ≤86W	05. Operating humidity: 20%-90%, no condensation	
03. Standby power: ≤1W	06. Storage temperature) -20- 60 C	
Electrical parameters:		
01. View distance: 60cm-130cm	04. Grating technique: Lenticular grating	
02. Optimal view angle: 50° (horizontal)	05. Mask identification: Available (blue, white and green)	
03. Human eye tracking: Available/Available for mask and surgical cap	06. Mirror image function: Available (one-key switch between upper and lower jaws)	

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For patients

- Give patients a clearer understanding of teeth condition, strengthen dentist-patient communication and increase revenue.
- Reduce misdiagnosis, improve outpatient reputation and patient's trust for Dentists.
- Ultra large magnification and depth of field realize higher treatment accuracy, reduce surgical injury and shorten the healing period.



For surgeons

- Without changing operation habits, avoid interpupillary distance adjustment, improve sitting posture like traditional microscopes and reduce learning time as well.
- 4 times magnification and depth of field compared to that of traditional microscopes, higher accuracy and operating precision.
- No requirements for position and constraints of dual objective lens for eyes, higher dentist-patient communication efficiency.
- Multi-angle adjustment of lens and flexible operation enable easy observation of different tooth positions.
- No long-time observation under eyepiece, less operation time and higher work efficiency.