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OMS2380
SURGICAL MICROSCOPE



High-Quality Optical Components

The core components are designed with high-quality craftsmanship, featuring multi-layer optical coatings for a wide field of view, high clarity, and high resolution.



0–190° Adjustable Binocular Tubes

Enables doctors to maintain an ergonomic posture, effectively relieving and preventing muscle strain.



Accurate PD Adjustment

Features an adjustment accuracy of less than 1 mm, allowing users to quickly set their optimal PD.



Wide-Field Eyepieces

With a field of view angle greater than 50°, features: eye point height adjustment and diopter adjustment.



VarioDist Long-Range Zoom Objective Lens F=200~450mm

250mm focusing range ideal for general dentistry, fully covering all oral depths. Once ergonomic position set, then simply adjust the zoom knob to view all fine details without repositioning the unit for efficient, effortless operation.



LED Integrated Illumination Module

Featuring high-quality medical-grade LED light sources, it offers true-to-life colour reproduction and clear light spots. Less energy consumption, longer lifespan, ensuring greater safety and reliability. It's designed to operate silently.



Halogen



LED

Spots and Filters

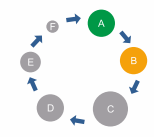
4-level adjustable illumination spot (large / medium / small / micro), easily tuned via knob to fit diverse surgeries. Built-in yellow and green filters.

Yellow Filter and Green (Red-Free) Filter

Yellow Filter: Prevents rapid curing of resin materials

Green Filter: Enhances visibility of small nerves and blood vessels during surgeries.

A.Green
B.Yellow
C.Large
D.Middle
E.Small
F.Micro



4-level Adjustable Spot



Normal



Yellow Filter



Green Filter

FluoDet™ Fluorescence Module (optional)

For detecting caries and removing excess resin materials.



AntiReflect™ Module: Polarized light to reduce reflections and reveal true details (optional).

FreeMov®

ZERO-GRAVITY BALANCING SYSTEM



FreeMov® Zero-Gravity Balancing Arm

Adjustable balance knobs balance the microscope based on lens load. Single-touch angle / position adjustment delivers smooth, comfortable operation. Even with cameras or other digital attachments, balance adjustment knobs enable the main head to suspend at any angle.



Single-handed Precision Focusing



Dual-sided Adjustable Zoom Function



Integrated Brightness Adjustment



Short press to capture photos, long press to record videos

One-hand Operation

One-hand control for vertical, tilt and rotary adjustment, fully comfortable with DSLR, camera and smart device attachments. Rotating multi-function handle supports fast focus, zoom, light adjustment and recording.

MagPlus1.5™ (Optional)

One-touch magnification on binocular tube: doctors instantly boost magnification by 1.5x for finer details or reset to wide view easily.

	Magnifiers 12.5x	MagPlus1.5™
Magnification Factor	0.4x~2.4x	0.4x~2.4x
Magnification	1.8x~19.4x	1.8x~29x

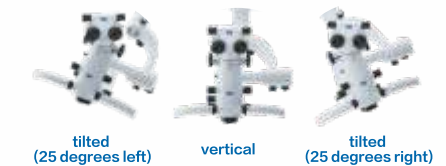
Continuous Zoom

0.4 ~ 2.4 x magnification factor delivers continuous 1.8 x ~19.4 x zoom for seamless observation.

CONTINUOUS ZOOM	Magnifiers 12.5x
Magnification Factor	0.4x~2.4x
Magnification	1.8x~19.4x
Field of View Diameters (mm)	123.8~11.6

Tilt Function

Specifically designed for clinicians. Maintain the horizontal observation position of the binocular tube.



tilted
(25 degrees left)

vertical

tilted
(25 degrees right)

ENHANCED DOCTOR-PATIENT COMMUNICATION

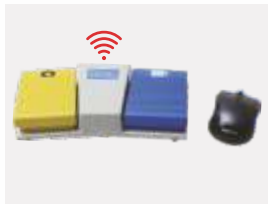
INTEGRATED ULTRA HD 4K IMAGING SYSTEM

ZUMAX integrates built-in Ultra HD 4K imaging with 3840 x 2160 HDMI. Adopting premium SONY CMOS sensors, it outputs real-time Ultra HD videos featuring low noise, high sensitivity, authentic and delicate colour reproduction. Equipped with built-in high-speed storage for fast recording of still and motion images, it supports scale measurement, image zoom and split comparison.



More Imaging Solutions

- Canon / Sony / Nikon DSLR
- Sony Alpha / Canon Mirrorless Camera
- Canon / Sony Digital Video Camera / 4K Digital Video Camera
- Easy 360 / Easy 360 Plus Mobile Phone Microscopic Imaging System



Mobile Phone



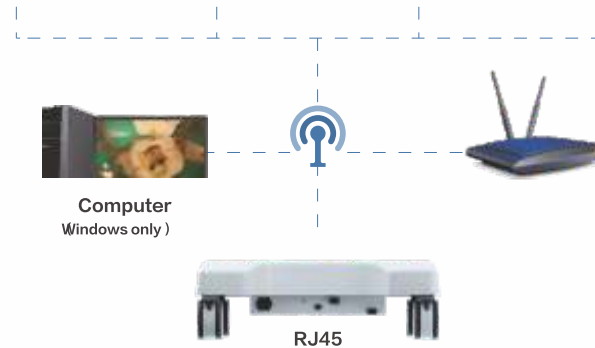
iPad



Laptop
(Windows only)



Computer
(Windows only)



DIGITAL 4K-3D IMAGING SYSTEM

NakedEYE 3D Display



FPGA Core Algorithm Technology—Groundbreaking Innovation

Integrated 3D image processing chip reduces reliance on external computing power, minimizing PC performance requirements and delivering real-time, lag-free 3D imaging.



15.6-inch 4K3D Ultra-HD Display—Premium Medical-grade Display

No traditional 3D glasses: authentic depth, high-quality 3D display, boosts surgical efficiency.



Eyeball Tracking Technology—Immersive 3D Visuals

Through eye-interlaced imaging technology, the surgical 3D visuals are highly realistic and vivid, with no ghosting in the reversal area. A cross talk rate of less than 3% effectively prevents dizziness.



70° Wide Field of View—Comfortable for Long-duration Operations

Featuring high refresh rates, low blue light, flicker-free display, and low latency, it reduces eye strain. Vibrant, lifelike colours ensure doctors see more clearly and precisely during long procedures.

ZUMAX Micro 4K-3D System integrates premium optics and imaging for revolutionary vision. Built-in dual 4K-3D Ultra HD imaging system delivers true-to-life, vivid 3840 x 2160 visuals. Real-time 3D output serves clinics, teaching and research; stereoscopic depth perception accelerates learning curves. High-quality imaging optimizes doctor-patient communication. It lifts microsurgery success rates, reduces revisions and postoperative risks, improves patient satisfaction and clinic competitiveness.

Highly Innovative Integration

Digital NakedEYE 3D Display integrates with OMS2380.

Adopting FPGA Core Algorithm Technology, it upgrades 4K-3D microsurgery from clear to true-to-life vision. Surgeons gain immersive stereoscopic views without eyepieces or 3D glasses.

Redefine Workflow

Digital 4K-3D External Vision reshapes surgical workflow.

Its ergonomic design eliminates rigid operating postures, offering 360° full lesion view and unobstructed surgical angles. It pioneers next-gen microsurgery.

Empower Training Transformation

Digital 4K-3D External Vision features dual 4K 2D/3D display for teaching.

Switch freely between optical and digital modes, delivering immersive real-time visuals to replicate surgical scenes, boost training efficiency and shorten learning curves.

Digital 4K-3D External Vision

OMS2380

HD Photo / Video button

0° –190° INCLINABLE BINOCULAR
TUBES With PD ADJUSTMENT

FreeMov® Zero-Gravity Balancing Arm

Left-right
Balance Knob

Left-right Balance Knob

Integrated 4K Ultra HD
Imaging System (optional)

- Multi-platform Wireless Transmission
- Integrated High-speed Storage

Integrated
Laser Filters

Continuous Zoom Knob

Spots and Filters
Adjustment Knob (size, colour)

FluoDet™ Fluorescence
Module

High-eye-point
Wide-angle Eyepieces

Front-back
Balance Knob

Front-back Balance
Tuning Knob

Focus Knob (Fine Focus)

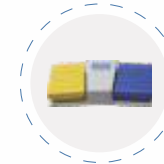
VarioDist Objective Lens (Apochromatic, F=200=450mm)

ACCESSORIES



**Rota 360 Rotatable Optical
Imaging Function**

Fully supported on Rota digital devices, cameras and Easy360 mobile ports, it delivers lossless 360° optical rotation. Case images need no post-editing, with flexible viewing angles for live teaching and doctor-patient communication.



**Wireless Foot Pedal
for Camera**

Suitable for use with Canon / Nikon / Sony DSLR. It allows doctors to capture satisfactory clinical images at any time during treatment.



**Depth of Field Enhancer
(Variable Aperture)**

Based on optical imaging principles, the variable aperture can triple the depth of field in captured images, with particularly noticeable effects at high magnifications.



Rotating Ring



45° Optical Extender



**30° Optical Extender
And Beam Splitter
(20%:80% or 50%:50%)**



**Easy360
Mobile Phone Adapter**



**Easy360 Plus
Mobile Phone Adapter**



**Rota 360
Digital Camera Adapter**



Digital Camera Adapter



**Digital Camera Adapter
(Canon / Sony / Nikon)**



Flash Adapter

TECHNICAL PARAMETERS

Basic Configuration

Magnification System	Continuous zoom system, magnification factor $\gamma=0.4\times-2.4\times$
Binocular Tube	$0^{\circ}-190^{\circ}$ inclinable binocular tube, $F=170\text{mm}$, PD: 54mm-76mm with digital readout, featuring an adjustment accuracy of less than 1mm, equipped with sterilizable knobs
Eyepiece	10X/12.5X wide-field eyepieces, diopter adjustment range $+7\text{D}$
VarioDist Objective Lens	Integrated VarioDist Objective Lens, $F=200-450\text{mm}$, working distance=250mm
Object Surface Illumination (F250)	LED light source $>70,000\text{Lx}$
Spot Diameter (F250)	Large spot diameter: $\Phi 160\text{mm}$
Field of View Diameter (F250)	123.8mm-11.6mm
Filters	yellow filter, green (red-free) filter
Handle	Dual integrated single-finger focus handles for left / right hands, featuring image freeze & recording, with sterilizable covers
FreeMov® Balancing Arm	Can adjust torque and damping according to lens load to keep the microscope balanced (2 balancing knobs, 2 balancing adjustment knobs) Makes operation smooth and comfortable
Arm Reach	1520mm (First Arm 500mm, Second Arm 720mm, Balancing Arm 300mm)
Illumination System	Dual-channel LED illumination system, continuously adjustable brightness, life span not less than 60,000 hours
Automatic Switch	The arm is equipped with an automatic power switch device
Installation	Floor-standing type (H-shaped base), 632 x 632mm

Optional Accessories

Eyepieces	10X/16X/ 20X wide-field eyepieces (also suitable for eyeglass wearers) diopter adjustment range $\pm 7\text{D}$
Integrated 4K Imaging System	Integrated 4K Ultra HD Imaging System adopting SONY CMOS, real-time 3840*2160 Ultra HD image output Built-in high-speed memory for rapid dynamic / static image storage; supports scale measurement, image zoom and comparison
External Imaging Solutions	Canon / Sony / Nikon DSLR Adapter Canon / Sony / Nikon DSLR Rota 360° Adapter Digital Camera Adapter (Compatible with Canon, Sony,) Easy360 / Easy360 Plus Mobile Phone Adapter
FluoDet™ Fluorescence Module	For detecting caries and removing excess resin materials
Integrated Micro 4K-3D Imaging System	Dual USB 3.0 Image Storage: Picture and video recording formats: JPEG, MP4; HDMI+12G-SDI Dual output Supports 3D stereoscopic image output and 2D image output Auto Focus + Voice Control
NakedEYE 3D Display	Size: 15.6 inches; Display area: 345.6mm (H) * 194.4mm (V); Resolution: 3840*2160 Pixel pitch: 0.09*0.09mm; Brightness: 340cd/m ; Aspect ratio: 16:9 HDMI Input: HDMI2.0*1 / only support 3840*2160@60Hz; HDMI Output: HDMI2.0*2, 1x 3D, 1x2D Supported video colour format: YCbCr 4:4:4; Operating temperature: $0^{\circ}\text{C}-50^{\circ}\text{C}$; Storage temperature: $-30^{\circ}\text{C}-70^{\circ}\text{C}$ Viewing angle: 70° horizontal, 50° vertical; Input voltage: 110-240V, 50 / 60Hz; Power consumption: 30VA Viewing range: 40cm-150cm; eye tracking supports masks, glasses & surgical caps

