2nd GEN

3840 X 2160(60p)

4K 3D

Digital RealMicro

4K 3D Video Digital Operating Microscopy System

Model name VOMS-400 (OPH)

Excellent 4 times higher resolution and perfect colors with original digital 4K 3D video microscope system

SOMETECH
SINCE 1989

2nd GEN

Creating New paradigm With surgical Video Microscope

4K 3D

3840 X 2160(60p)

Sometech has made persistent effort in R&D to introduce world class surgical equipment.

Since invented the world's first concept of a Full HD 3D digital microscope, we can produce remarkably clear image through the latest ophthalmic surgical video microscope system.

RealMicro, model VOMS-400(OPH) with its unique patented technologies, offers a comfortable, safe, and precise surgical environment.

Experience the real depth & fine image of 4K 3D Surgical Video Microscope.

VOMS-400 is leading the trend of operation from the conventional binocular microscope to **4K 3D** surgical video microscope.

Anterior and Posterior Surgery (Vitrectomy & Membrane peeling)

RealMicro *Digital*

4K 3D

Revolution of Microscope

Innovative change of Operating Theater (OT)

It contributes surgeons to concentrate on surgery due to effective connection with other surgical devices and also it optimizes to the effective workflow during surgery.
It is time to transform your OT to innovative digitalized system.

True head up posture

Surgeon's head up posture can be maintained throughout whole surgery by watching the 4K 3D monitor, providing freedom from inevitable neck pain, back pain, eye strain, and headache.

Easy Cooperation and education

Everyone in the OR cooperates easily and observe every detail of surgery as they watch same real time 3D image together with the surgeon. Captured 3D surgical images can be used for training and education.

VOMS-400 DETAILS

Advantage (Mechanic)

Structural features

* Optimizing Operating Theater(OT) space
* Motorized vertical, horizontal and tilting extension arm

Microscope Camera Head

* 2Turret (20/40 mm) multi lens 4K 3D camera head
* Motorizing X, Y, Z movement control
* Integrated wide angle viewer (option)
* 4K 3D / 3840x2160 / 60P camera

* Ergonomic design allows easy and precise movement. Surgeons can easily place the camera on the surgical area
* X,Y Stage movement

Control system

* 10.4 Inch TFT Touch LCD
* Adjustable pedal function (option)

Touch screen

* Comfortable touch panel
* Video Source: Up to 3 users

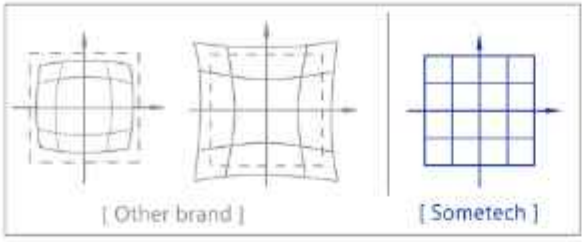
X,Y Stage movement

* C-curve arm for the straight view of surgeon
* Ergonomic head up structure
* Decreasing of image tremble

On bed type 4k 3D Monitor (option)

* 3D visualization is more convenient for main doctors during the surgery process.
* Compact design and easy to install.
* 3D 4K Monitor [55 Inch (3840X2160)/FSN&SONY
* 3D 4K Monitor [32 Inch (3840X2160)/FSN
* 3D 4K Monitor [31 Inch (4096X2160)/SONY

Advantages (Visual)



Minimized distortion

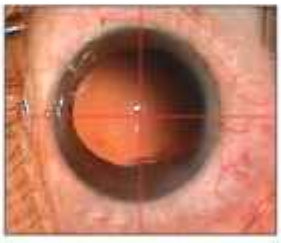
Sometech's patented lens can minimize the chromatic aberration. Surgeons are relieved from eye strain, dizziness, and headache caused by distortion.

Fine Focusing and wide field view

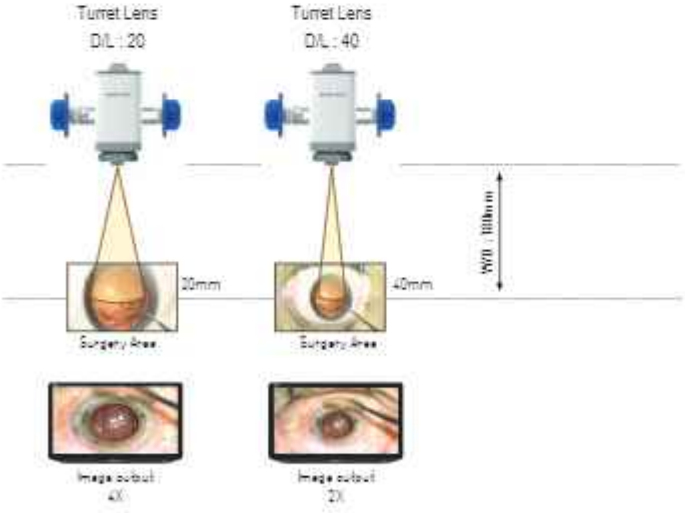
Sometech's patented image processing technology provides crystal clear images not only for the immediate but also the surrounding area.

Red reflex

Brilliant red reflex enables easier and safer cataract surgery.



Cross line on/off



2.0X optical zooming by turret

Adjustable optical zooming up to two times by a simple motorized twist of the 2 turret lens

Optical zooming based on Diagonal Length (D/L:40mm)

D/L 20 is twice the D/L of 40

Foot switch

TFT Touch LCD

2.0X digital zooming by foot switch or GUI

Digital zooming can be operated either by GUI (LCD screen) on the main unit or by footswitch for maximum convenience during surgery.

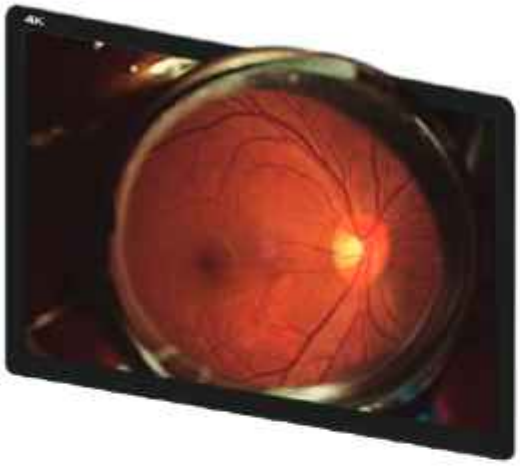
Foot switch

2.0x Digital zooming by foot switch

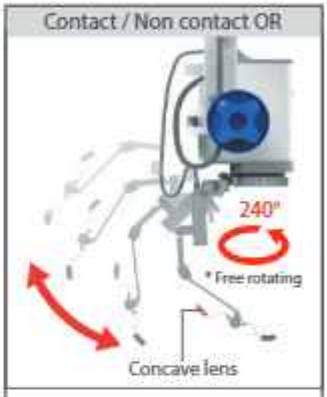
Anterior & posterior surgery

VOMS 400 can be used for various opthalmic surgeries(Cataract / Retina / Glaucoma / Cornea / Lacrimal gland / Blepharoplasty). It is also uesful for accurate operation, and 3D recording for surgeon trainees.

Retina

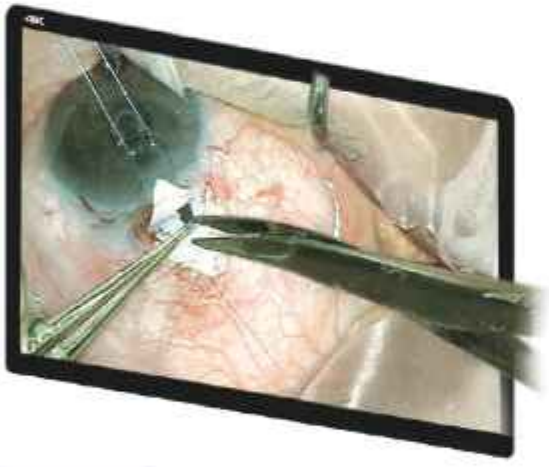


D.L : 20-40mm
(W.D : 180mm)



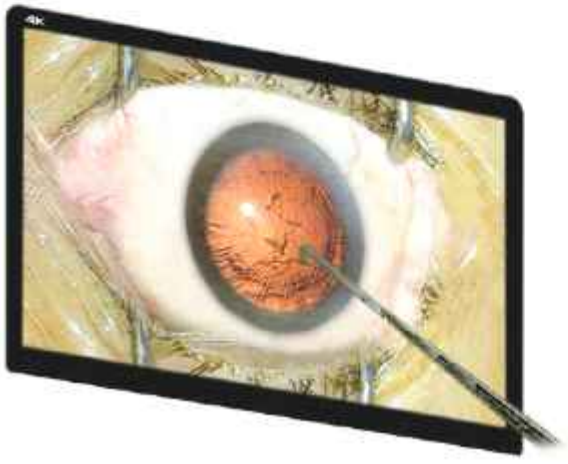
240° Rotating lens holder
(Wide field lens, Narrow field lens)

Glaucoma



D.L : 40mm
(W.D : 180mm)

Cataract



D.L : 40mm
(W.D : 180mm)

Cornea

D.L : 40mm
(W.D : 180mm)

Lacrimal gland

D.L : 20-40mm
(W.D : 180mm)

Blepharoplasty

D.L : 20-40mm
(W.D : 180mm)

Lens specification

Distance and monitor size	Lens magnification based on D.L (Digonal length)	
Working distance	W.D : 180mm	
Diagonal length	20mm	40mm
32"Monitor	40x	20x
55"Monitor	70x	35x

* Magnification can vary by monitor size

3D SURGICAL ONLINE
www.3dsurgicalonline.com

Effective education & training through 3D Surgical Vision System


▲ Capture the 3D surgical content using 4K 3D microscope.

▲ Capture the 3D surgical content using 4K 3D laparoscope.

Client Center


▲ Edit VOD contents ▲ Shoot surgery commentary

▲ Worldwide online broadcasting through stable CDN network.

Joint business between hospital and 3DSurgicalonline

Developing AR/VR surgical simulator


◆ VOD contents

VOD service to watch and follow surgical procedures in various applications.

Setting up environment of VR/AR


◆ Education by Live surgery

- Online broadcasting platform allows streaming of real-time live surgery images to anywhere, anytime in the world.
- Live surgery can be also supported by Glasses - Free 3D Display

User group service

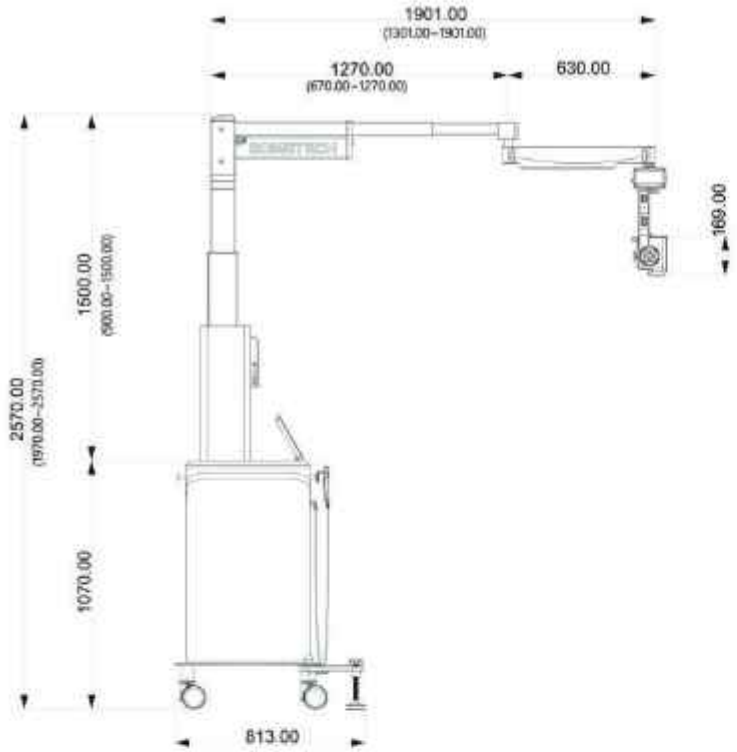
GROUP

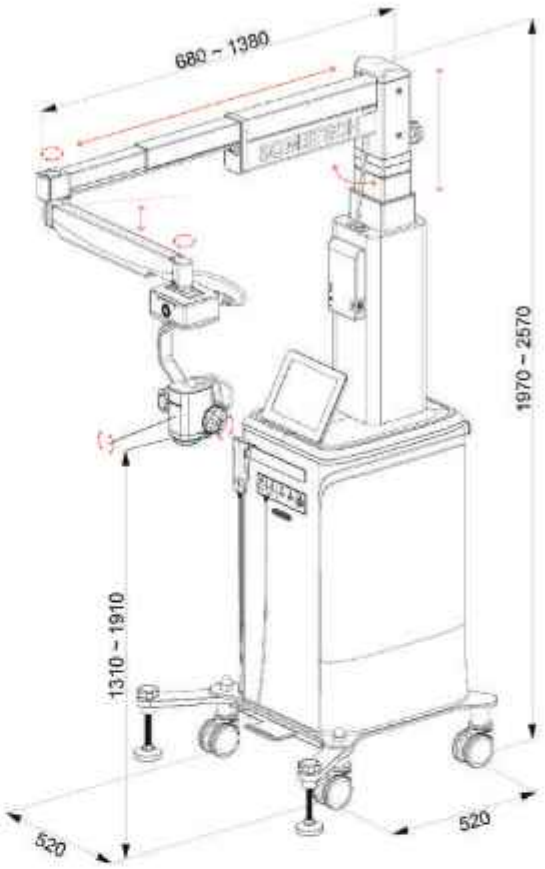

◆ Group

Hospitals, medical schools, surgical societies are supplied with an online platform to share information among colleagues, students / faculties, and members for mentoring surgeries, surgical case studies, and online seminars.

Detail view


Horizontal Arm
Knob Stop
Vertical Lifter
CCU Box
TFT Touch LCD
Wired Remote Control
Onetouch Caster Lock Pedal
Stopper
Foot Switch
Main Controller
Tilting Arm
X - Y Stage
Z Focusing
Camera Head
Optional Lens
① 3Turret Lens
② 2Turret Lens
(Additional Option Wide Field Lens)
Handgrip
On bed type 4k 3D Monitor
4K 3D Monitor (Option)
① 55" (Medical Grade)
② 32" (Medical Grade)
SONY, FSN, ETC.





TECHNICAL SPECIFICATION

• Real Micro : Model VOMS-400 4K 3D Video Digital Operating Microscopy System

Division	Performance	
Power input	100-240V AC 50/60Hz	
Interface	TFT Touch LCD, Foot Switch, Wired Remote Control	
Light intensity	Levels 1 to 10 (where, Level 0=OFF)	
Light color temperature	4500K° ± 5%	
Video recording method	MPEG-4 / H.264 File Extension (AVI)	
Resolution	4K 3D / 3840 x 2160 / 60p	
Video output	Ultra-HD (3840x2160) HDMI x 4	
3D format	Side-by-side (SBS)	
Magnification	Optical Zoom	1.0x – 2.0x
	2Turret (OPH)	D.L 20mm(40x) - 40mm(20x) / Based on 31" Monitor
	Digital Zoom	1.0x – 2.0x
Working distance	2Turret Lens : W.D=180mm	
Micro focus	Motorized X, Y, Z control	

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SOMETECH
SINCE 1989

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