Surgical Video Microscope

RealMicro

VOMS-100

Patented in Korea and PCT filed

CE

RealMicro
allows surgeons to perform safe and precise surgery with minimum discomfort and stress.

SOMETECH
SINCE 1989

A NEW PARADIGM IN SURGICAL VIDEO MICROSCOPE

Sometech has tirelessly invested in R&D to introduce world class surgical equipment. We invented the world's first concept of a 3D digital video microscope system and released it on the medical market.

RealMicro **with its unique patented technologies, offers a comfortable, safe, and precise surgical environment.**

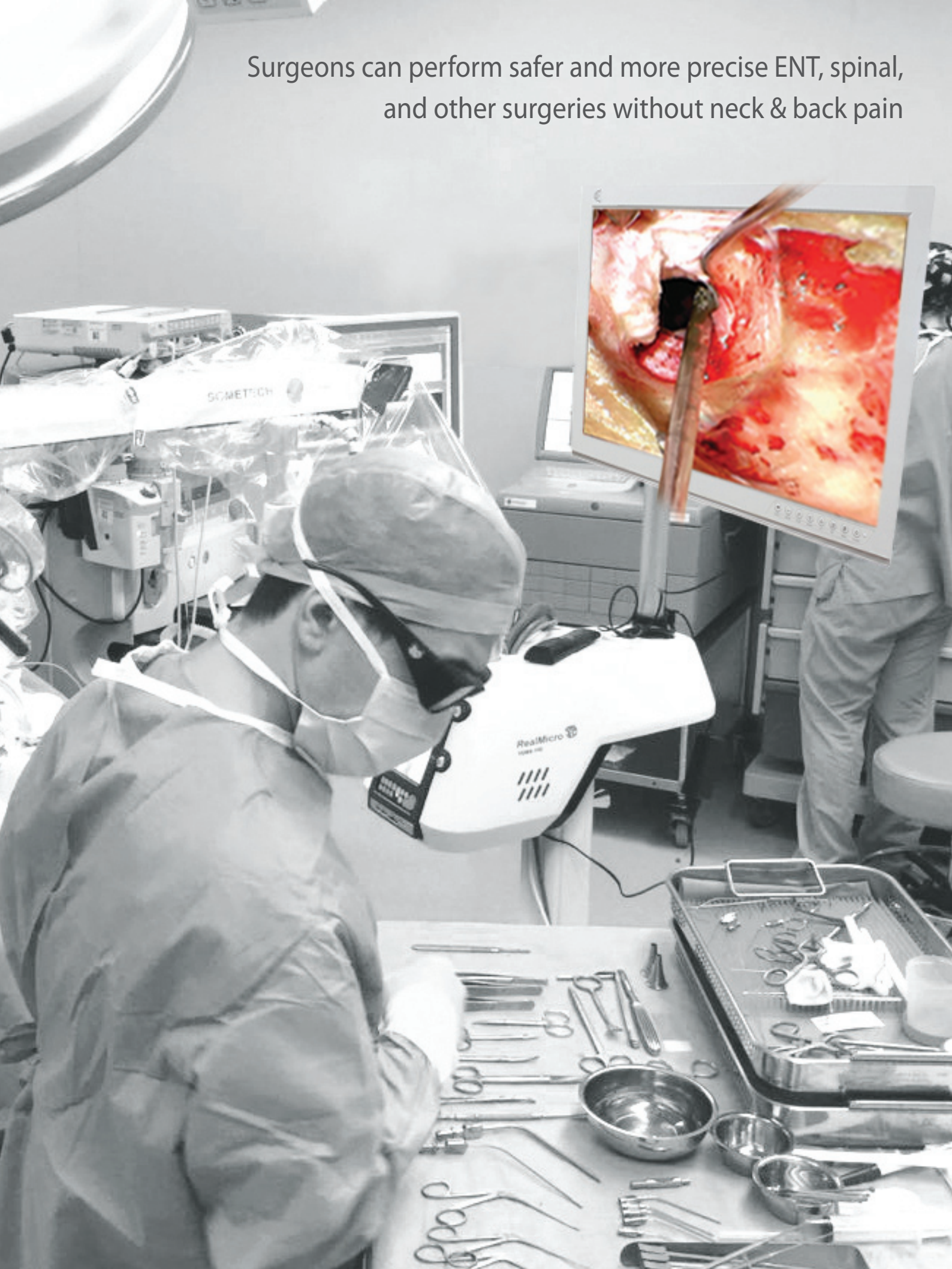
Come and discover the world of perfect full 3D image in high definition.

RealMicro

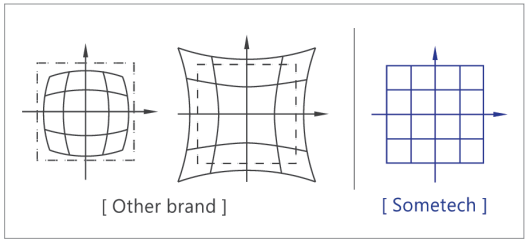
Our patented new concept of head-up display provides

· Relief from neck and lumbar pain, eye strain and headache
· Shorter and more precise surgery with 3D image in full HD
· Compact design offers more workable space in the operating room
· X, Y, Z axis micro movement

Surgeons can perform safer and more precise ENT, spinal, and other surgeries without neck & back pain



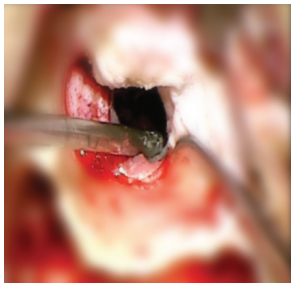
Advantages



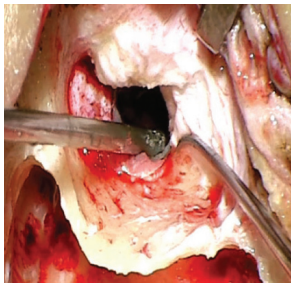
Distortion free

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

(* Actual image of otitis media surgery)



[Eyepiece type]



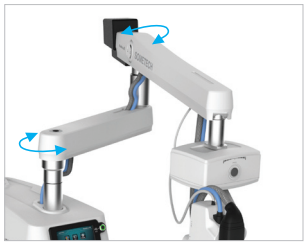
[Head-up type]

Unparalleled depth of focus and wider field of view

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

Intuitive GUI

VOMS-100 provides intuitive GUI and built-in recording system. The user can set 'image quality' and record by touch screen.



Easy and precise movement

Ergonomic design allows easy and precise movement. Surgeons can place the camera to the focus on surgical area easily.

Effective training tool for surgeons

Traditional surgical microscopes utilize eye-pieces with a beam splitter to share images with less than ideal output quality. VOMS-100 directly transmits 3D full HD images from the monitor without degradation in picture quality. Surgeon trainees are able to learn and assist surgeons more effectively.

X, Y, Z axis movement is fully motorized

VOMS-100 adjusts to your needs. With the microscope's touchscreen you can control both the microscope and the video camera. The display is easy to use and can be easily accessed during an operation.

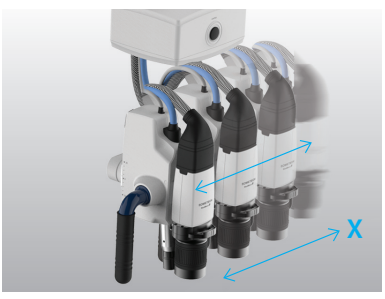
VOMS-100, fully motorized movement provides surgeons with greater convenience.

Wireless footswitch

The ergonomically designed wireless foot switch panel enables you to control VOMS-100 precisely.

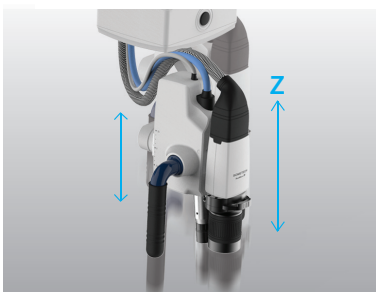
Compact design for even limited space

The compact design makes VOMS-100 suitable for smaller operating rooms such as those in local clinics and ASCs (Ambulatory Surgical Centers).



X axis movement

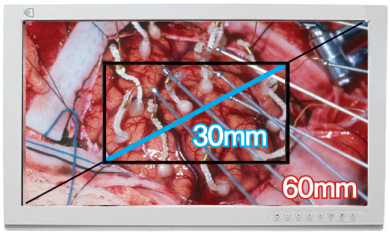
Y axis movement

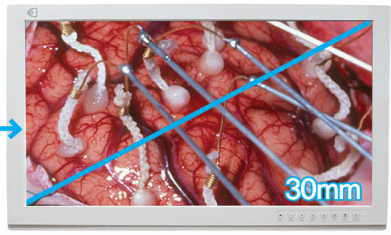


Z axis movement

Wireless footswitch

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





* Two times optical zooming

Convenient digital zoom by footswitch

Digital zoom can be operated either by GUI on the main unit or foot switch for maximum convenience during surgery.

< Lens magnification >

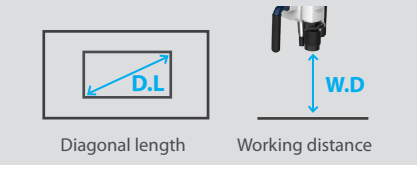
Distance and monitor size	Lens magnification based on D.L(Diagonal length)									
Single lens D.L	20mm		30mm		40mm		50mm		60mm	80mm
Working Distance	W.D : 230mm								W.D : 350mm	
Turret lens D.L	10-20mm		19-38mm		30-60mm				30-55mm	50-90mm
	10mm	20mm	19mm	38mm	30mm	60mm			30mm 55mm	50mm 90mm
Working Distance	W.D : 210mm		W.D : 220mm		W.D : 230mm				W.D : 310mm	W.D : 350mm
27"Monitor	68x	34x	36x	18x	22x	11x			22x 12x	13x 7x
32"Monitor	80x	40x	42x	21x	27x	13x			27x 14x	15x 9x

* Magnification can vary by monitor size

Options

Various magnification 3D lenses and light focusing lenses

One microscope lens and matching light focusing lens will be provided in the select unit. Additional microscope lenses and light focusing lenses are available for optional purchase.



Handrails for disinfection

Reusable handle cover is available for sterilization.

Light ON/OFF footswitch

Turn on/off the side light and coaxial light by pushing a button.

Spinal surgery

For spinal surgery, a longer custom pole and extended arm are available.

Monitor station(NS option)

During neuro surgery operation, surgeon can check the image on the main monitor and the auxiliary IONM(Intraoperative Neuro Monitoring) next to the main 3D monitor simultaneously to monitor AEP, SEP, VEP, MEP, EMG, EEG and vital sign.

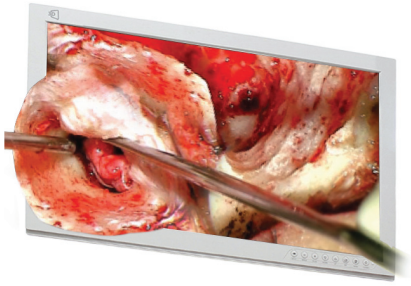
Brain Neuro Navigation can also be connected next to the main monitor so that surgeons can monitor surgical areas as well as reference areas by looking at various monitors in the same direction.

This combined system can also be connected to multiple monitors for assisting staff to increase efficiency in the operating room.

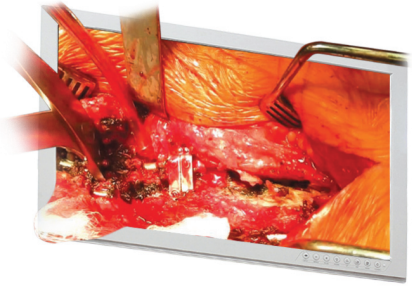
3D Auxiliary monitor

Separate monitor allows surgeons and assistants to share surgical images from different directions.

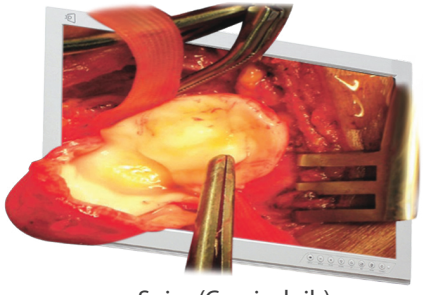
Applications



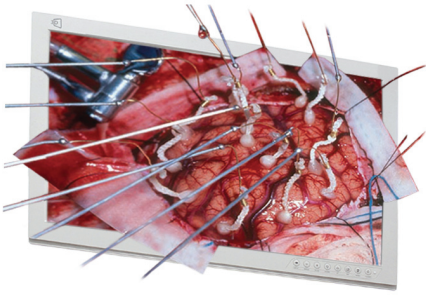
ENT(Otitis media)



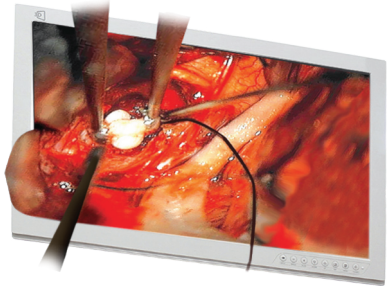
Spine(Lumbar)



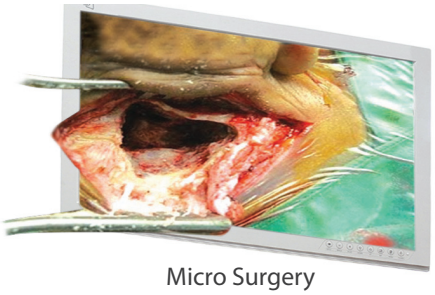
Spine(Cervical rib)



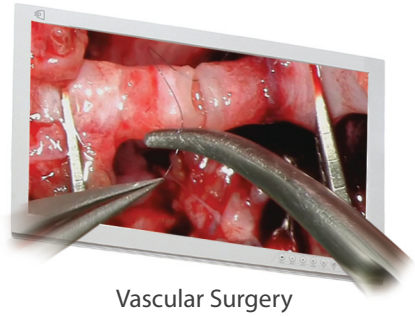
Brain(Cerebrovascular diseases)



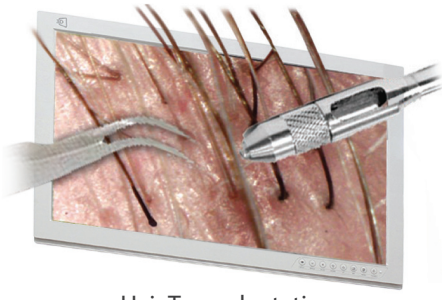
Brain(Tumor)



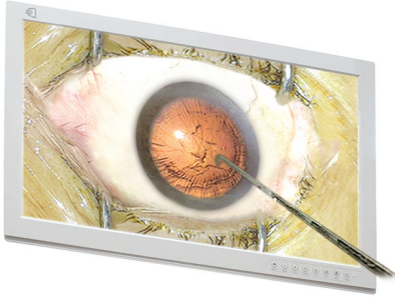
Micro Surgery



Vascular Surgery



Hair Transplantation



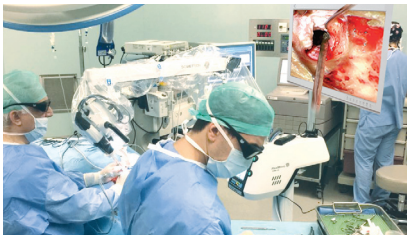
OPH(Cataract)

Oral and Maxillofacial

* All surgical including ENT / Spine / Brain / Microsurgery / Hair transplantation / Plastic & Reconstructive / Ophthalmology / Dentistry.

3D SURGICAL ONLINE
www.3dsurgicalonline.com

Connecting surgeons worldwide in 3D



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

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

Client Center

▲ Edit VOD contents

▲ Shoot surgery commentary

▲ Worldwide online broadcasting through stable CDN network.

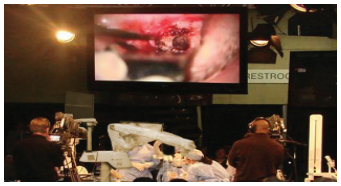
Joint business between hospital and 3DSurgicalonline

VOD

◆ **VOD contents**

VOD service to watch surgical content in various applications.

LIVE



◆ **Live Surgery**

Online broadcasting platform allows streaming of real-time live surgery images to anywhere, anytime in the world.

User group service

GROUP

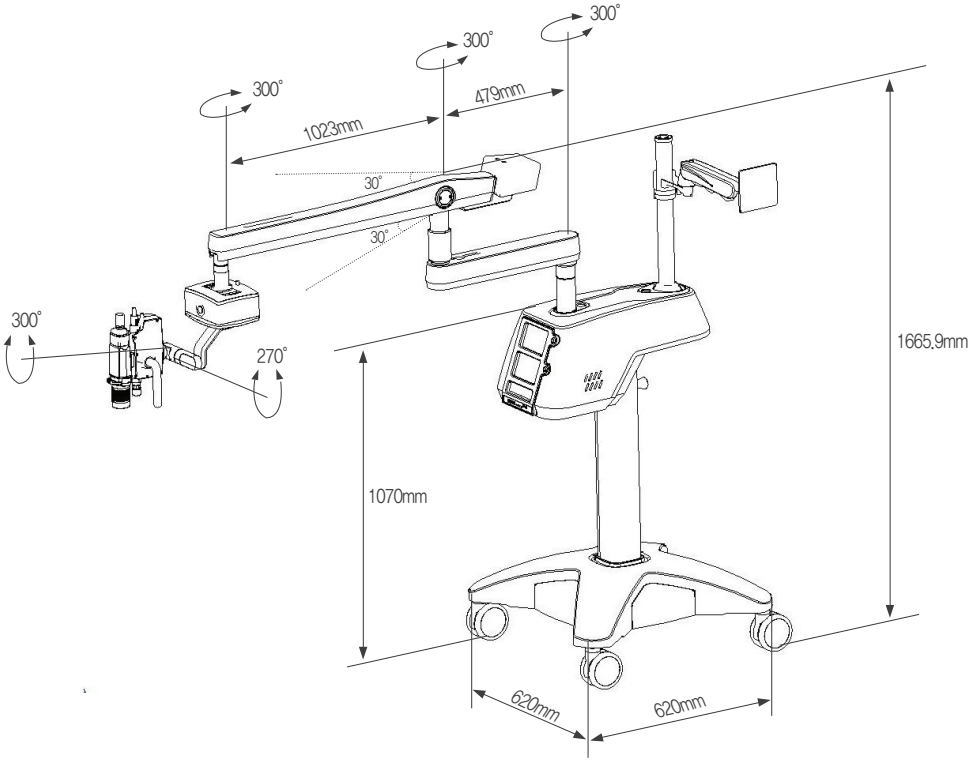
◆ **Group**

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.


Balance arm
X, Y axis
Z axis
Camera
Lens
Main unit
Wireless footswitch
SOMETECH
RealMicro

Technical Data

3D RealMicro VOMS-100



▪ 3D RealMicro VOMS-100

Dimension	300mm(W) x 600mm(D) x 250mm(H)
Weight	75 kg
Power	100-240VAC / 50-60Hz
CCU	Video resolution : FULL-HD(1920x1080), HDMI
	3D Muxing format : side by side
	Binocular digital zoom control : 1.0x~3.0x (Step 0.1x)
Recorder	Still capture method : JPG(1920 x 1080) file extension(.jpg)
	Video compression method : MPEG 4/ H.264 file extension(.AVI)
	External MIC sensitivity -20dB~-50dB recommend -23dB(1Khz at 1Pa)
	Line out(3.5mm diameter jack mono) reference SMPTE 296M/ 274M
	Media storage : SDHC / USB memory stick
Light source	Side : White LED(cold light) light fiber type built into the unit Intensity : 0(Off)~10(Max), brighter than Xenon 300W light source Life time : about 60,000 hours
	Coaxial : White LED Coaxial Type with UV cut filter Intensity : Off/On, 410lm (at 1.5A)
X, Y, Z range	X : 80mm, Y : 50mm, Z : 50mm

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CE

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