

DIGITAL SURGICAL LOUPE

Adjustable zoom

Perfect education tool

Powerful LED work light

"The artificial intelligence and the projection provide added value"

CE

Prof. dr. Nicole Bouvy

Outstanding 3D image quality

3D real-time streaming to OR monitors

Lightweight system <280 gram

Digital preoperative information in the picture

3D recordings



CrossCare

www.i-medtech.nl

Vlaanderen-Nederland

"I-Med has something unique: I have not seen anything like this anywhere in the world"

His first contact with I-Med dates from about a year ago: "I read something about VR glasses and heard that there was a company here on campus that had a lot of experience with it. I contacted them and found the combination of magnifying glass and camera interesting. It is an ideal opportunity to train our students before they actually start operating on people. I knew that PS Medtech - also on the Brightlands Maastricht Health Campus - is developing software that can convert 2D scans into 3D images. "Is that possible with such glasses?" I asked and the ball started to roll. "

Prof. dr. Dr. Michael Jacobs is cardiovascular surgeon in Maastricht and in Aachen. He is head of the Heart / Vascular Center at Maastricht UMC + and he is head of Vascular Surgery at Uniklinik RWTH Aachen.

"The artificial intelligence and the projection provide added value"

"The most innovative added value of I-Med's digital surgical loupe is that you can incorporate important, useful tools into the glasses. That makes it a practical tool, tailored to your specialism. Making the surgery less invasive and the reduction of complications have my special attention and in that area I certainly see opportunities at I-Med. A professional risk for all surgeons is that you damage tissues that are difficult to see. I am very interested in the possibilities to install separate filters that - for example with infrared light - make lymph nodes, lymph vessels and nerves visible in real time. If that succeeds, we will soon have a fantastic tool as a surgeon to cause even fewer complications of surgical cutting ".

Prof. dr. Dr Nicole Bouvy is Professor of Innovative Surgical Techniques and Surgeon at the Maastricht UMC +, where she is also head of innovative surgery.

Datasheet specifications

Head Mounted Digital Loupe fully autonomous wireless system CE Approval

Camera Technology & Optics: Sensor (Sony) Working distance

Field of Depth Inclination from horizontal 2x 12,4 MPix, CMOS, 4K, 60fps 350 to 500 mm (factory preset) >150 mm -25°

Datasheet specifications

Display: Display technology (Sony) Resolution

Aspect Ratio Field of view

Adjustable brightness (image enhancement) Contrast ratio

Power LED: Cool White Performance Beam angle

Head Mounted System: Weight Power Microphone Closed system OLED, 60fps, 3D-Strereoscopic 2 x 1920x1080 (1080p), Full HD 16:9 Widescreen 40° Horizontal (wide angle) max. 500 cd/m2

1:10.000

4500 K 1W, 50.000 lumen spot 70 or 150mm at 43 cm

<280 grams 3,0 W (low power) Built in IP50, easy cleaning <10ms

Delay

Clinical NX Wearable PC:

Nvidia Xavier NX CPU (NVidia Jetson nano compatible)6-core NVIDIA Carmel ARM®v8.2 64-bit CPU 384-core NVIDIA Volta™ GPU 48 Tensor Cores 8 GB 128-bit LPDDR4x 51.2GB/s 16GB eMMC 5.1 Storage Micro SD card for recordings up to 512GB

Ports, Peripherals & System Ports: 2xUSB3.2 type-C, 1 x USB3.2 (power), Wi-Fi 802.11a/b/g/n/ac/ax 2×2 (up to 2976Gbps), Bluetooth 5.0 Dual smart battery (hot-swap) incl. charger Example battery: 18Wh 122 grams, up to 4Hrs No active cooling Aluminium casing, closed system, easy cleaning Dimensions:170x120x35mm (6.7" x 4.7" x 1.4") Mass: approx. 720 grams Software: Linux 4.9.140, CUDA 10.0.166 Footpedal Herga wireless Bluetooth Compatible with Barco Nexxis platform



	ADVANTAGES
Diagnostics • Video Reporting of Live Video Broadcasting	
	Remote support/assistance Training & Instruction support
Surgery	Remote guidance and tutoring Variable zoom from 0 to 4 times
	 Real-time video stream of (surgeons view) on OR large screen
More eff	Accurate follow up by full HD 3D recording Set-up video library for instruction/training/evaluation
more en	• Wider viewing angle than the classic loupe glasses (40 degrees versus <10 degrees)
	Better DoF (Depth of Field) than classic loupe glasses (> 15 cm)
	image enhancement In picture CT, MRI scans, Protocol and life patient
	data information Better anticipating teamwork due to streaming of
More efficient	
	Maximum contact with staff due to 1 x magnification option (look through, wide angle) Postponement use of the operating microscope and
	faster availability • More efficient and better quality procedures
0-1-1	Very effective education with live remote surgeons view and explication
Saler	Supports physically correct operating posture other than with classic loupe (ergonomics)

- Compliant with ergonomics legislation, reduce fatigue
 In picture protocol support, during operation





Wearable PC

Foot switch

Accu pack



Versions, functionality

Version 1.0 (Q1-2021)

Adjustable: Zoom 1-4x, light, contrast, brightness, exposure Streaming & Recording (3D/2D Full HD @ 60FPS, Real-time)

Version 1.2 (est.Q4-2021) Picture in Picture: Scans (MRI, CT, X-ray, ..3D), Patient life data Image Stabilisation

Version 1.5 (est.Q1-2022) Web interface: remote check, control and upgrade Programmable personal settings Image enhancement (better tissue recognition)



NB. Specifications are subject to change without prior notice

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