

Live immersive surgical experience

mSurgery LiteXR

The Ultimate Portable Solution for Collaborative Surgery and Surgical Education

Introducing mSurgery LiteXR, the ultimate portable solution for real-time surgical transmission and immersive recording. Designed for unparalleled versatility, LiteXR enables surgeons and physicians to connect and engage virtually from anywhere in the world, transforming learning experiences and collaborative medical practice. While mScart is known for its transportability within medical facilities and mSkit for its transportability across various locations, mSurgery LiteXR takes portability to the next level. This system is specifically designed to be used with Magic Leap XR glasses, providing unmatched flexibility and ease of use for circumstantial installations.



mSurgery LiteXR is not just portable; it's a fully integrated, lightweight, free – hand and easyto-deploy system that enhances the capabilities of any surgical team.

With this solution, you can effortlessly share the surgeon's field of view, transmit live surgeries, and record procedures for training, telementoring and review, all with the added benefits of augmented reality.

Whether in a fully equipped hospital or a remote location, mSurgery LiteXR provides the tools necessary for effective and immersive surgical collaboration and education.

Transformative Use of XR Glasses in Surgery Education and collaboration

Integrating the advanced technical features of **XR glasses** like Magic Leap 2 with the functionalities of **mSurgery transforms this valuable electronic gadget into a powerful realtime tele-transmission tool for surgical procedures**. With a simple mSurgery subscription, you can enhance this resource to share the vision (both the real visual field and augmented reality projections) externally, live stream and record surgeries, receive and provide mentorship, teach surgery, and review your procedures.



Key Features of XR Surgery Connect with Magic Leap 2



Real-Time Sharing and Mentorship

The XR Surgery Connect subscription with Magic Leap 2 offers a **dual mentorship experience**, whether you're providing guidance or receiving it.

 Mentor with shared vision: As a mentor, wearing the headset allows you to share in real-time what you see in the operating room, enabling others to observe the procedure from your perspective and facilitating real-time teaching and guidance.



• **Receive personalized mentorship:** If you're wearing the headset, a remote mentor can see

exactly what you're seeing during the surgery. This allows for **direct and contextual mentorship**, guiding you step by step as you perform the procedure.



• Share the real field of view from the operating room: View the patient, the procedure execution from the surgeon's perspective, team communication, and leadership.



• Share all assistance projected onto the surgeon's lenses during the procedure(*):



Real-time data, including access to patient medical records, vitals, and reference materials to improve decision-making and optimize patient interactions.





- Information from AI and predictive analytics tools.
- Eye-tracking with 4 eye cameras.



Voice Commands: Facilitates screen exchange directly from the glasses.

(*) mSurgery displays all the images projected on the lenses of the glasses ("streaming camera"), but is not the provider of this content.





Seamless Sharing and Communication

The use of these smart glasses is straightforward, providing an **unobstructed view of the surgeon's face and not hindering communication within the operating room**. Outside the operating room, users connected via their medical devices can access all shared visual fields in a multi-screen format: real field and digital information.





Easy Connection to XR Surgery Connect

Connecting to XR Surgery Connect is as simple as using a smartphone. With a QR code, you can access XR Surgery Connect and enable connections. Magic Leap 2 glasses come with built-in connectivity to XR Surgery Connect, so no additional equipment is required to live stream and record surgeries. This gadget **connects via Wi-Fi**, so it can connect to **any internet network**: wired, 5G, or satellite connection (Starlink).





Surgical Image Capture and Annotation

This feature is designed to facilitate real-time interaction between the surgeon and external collaborators outside the operating room. Surgeons can receive critical information projected directly onto their Magic Leap lenses, including frozen images and digital annotations made by remote colleagues monitoring the procedure.



Image Capture and Annotation: External professionals using the mSurgery platform can freeze images transmitted from the AR glasses. Once frozen, precise digital annotations can be made on the image.



Direct AR Lens Projection: These annotations are projected directly onto the surgeon's Magic Leap 2 glasses, allowing for hands-free access to information without the need for additional monitors.





Ultra-Low Latency

Our system ensures ultra-low latency with signal transmission times of less than 400 ms. This minimal delay is crucial for real-time applications, **ensuring that the live stream is as close to real-time as possible**, which is vital for precise and timely interventions.





HD Transmission Quality

The system provides high-definition image transmission with a wide field of view and professional-grade bidirectional audio quality. This ensures that **all shared and communicated information through XR Surgery Connect is optimized.**



Cloud Computing System



No Specific Software Required

Our system doesn't require any specific software installation. Users can **easily connect** through simple URL links, making the system highly accessible and user-friendly.





Unlimited Storage Capacity

The cloud system offers unlimited storage capacity, all recorded data, including images, videos, and audios, are securely stored and easily accessible for future reference.



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FUENTE ©	NOMBRE 🗇	CREADO EN 💠	ACTUALIZADO EN 🗇		
	Collaborative surgery demonstration	11/6/24 16:41	11/6/24 16:47		
	Collaborative endoscopy with Dr. Alberto Morteza	10/6/24 16:13	10/6/24 16:13		
	Collaborative endoscopy with Dr. Katsumi Yamamoto	10/6/24 16:08	10/6/24 16:08		
	Case Presentation	7/4/23 10:32	13/2/24 18:25		





Massive Broadcast and Connectivity

The system supports up to 250 concurrent users, allowing for widespread dissemination of the surgical procedure. Users can connect from any electronic device, facilitating remote consultations, training, and real-time collaboration.



Technical Features of Magic Leap 2



Uses more than 18 different cameras and sensors to understand any space.



• Weighs 260 g, similar to a pair of headphones, with assorted nose and forehead pads for customized fit.



- Industry-leading optics.
- Optical tracking.



• Ambient light sensor: from 5 lux to 1,000 lux.



- 70° diagonal field of view (digital view).
- Usage time: up to 3.5 hours of continuous use (external battery available).





• Spatial control of projected 3D images.



• Compute pack can be clipped onto pockets or waistband.

Enhance your surgical practice and education with XR Surgery Connect and Magic Leap 2, ensuring better outcomes, improved efficiency, and advanced collaborative capabilities.



Comprehensive Support in Critical Moments

With **mSurgery LiteXR**, professionals from **different roles can consult and receive real-time** guidance during critical moments:



Surgeons can **share their view and get expert advice** to enhance decision-making and accuracy.





Surgical Nurses can consult specialists instantly to ensure correct procedure steps.



Anesthetists can connect with experts to manage complex cases, improving

patient safety.

Ambulance, emergency, and trauma teams can transmit real-time visuals to have immediate instructions projected directly onto their lenses

Unified Vision for Optimal Care mSurgery LiteXR empowers all medical professionals to consult and guide each other effectively, ensuring the highest quality of patient care in critical situations.

www.msurgery.net

