

UNCONSTRAINED PERFORMANCE™



Beyeonics One™

The first ophthalmic exoscope with an augmented reality **surgical headset**

Beyeonics One™ is a class I FDA listed visualization system

 BEYEONICS™

 BVI



The ophthalmic exoscope

The Beyeonics One™ ophthalmic exoscope is a high definition fully digital imaging platform that enables surgeons to see magnified, three dimensional (3D) images of the surgical field.

Inspired by pilots' head control units, our exoscope leverages advanced technologies developed by a leading global corporation and applies it to innovate the ophthalmic domain.



“Digital microscopy in general, and the Beyeonics One™ system in particular, are the catalysts that will take surgery to as yet unforeseen possibilities that the 21st century has in store.”

Jorge Calzada, Owner and Medical Director of Deep Blue Retina, Memphis, TN

Meticulously developed for ophthalmic surgeons - Beyeonics One™ is designed to deliver enhanced visualization and on-demand, consolidated, pre-operative data, which are naturally accessible and controlled by an immersive augmented reality surgical headset.

"Visualizing the surgical field through the AR headset removes the problem of vertical spine tethering typical of conventional microscopy, or angular neck tethering that is a shortcoming of external screen-based digital microscopy systems."

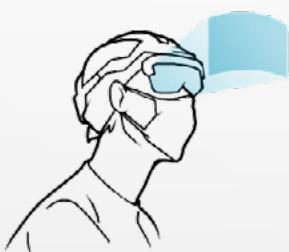
Jorge A. Fortun, MD, Associate Professor of Clinical Ophthalmology; Medical Director, Bascom Palmer Eye Institute at Palm Beach Gardens, Florida

Unconstrained Performance™



Unconstrained visualization

The fully digital optic design provides high magnification, clear, detailed image of the surgical field. The surgeon filter selection enables **enhanced tissue and membrane contrast**.



Unconstrained movement

The augmented reality surgical headset brings the surgical field right in front of the surgeon. The ergonomic-friendly design allows for adaptation of a more natural posture, demonstrated to **increase surgeon productivity and professional longevity**.



Unconstrained workflow

Zero perceived image latency and intuitive head gesture control allow the surgeon to maintain a continuous view of the surgical field **without losing hand-eye coordination**.

The AR surgical headset

The use of a lightweight, adjustable AR surgical headset display and control unit overcomes microscopy and monitor constraints. Head gestures are used seamlessly to control frequent functions such as **focus**, **zoom**, **pan** and **illumination** and are also used to toggle through various overlays.



A meaningful teaching and learning experience is enabled by the ability to connect up to **3 surgical headsets** simultaneously, with face-to-face or 90° viewing options and additional guidance features.



Beyeonics One™ is a class I FDA listed visualization system.

User interface

A 24" rotating touch screen with controls provides a clear image display of the surgeon's view to the OR team, enabling full engagement of the staff. The image may also be streamed to an external monitor.

Motorized arm

Allows maneuvering and smooth XYZ motorized position adjustment and lock. Extended reach allows the system to be placed away from the surgical field and improves OR setup.



The Beyeonics One™ console

Real-time video processing and data management.

Stereoscopic camera head unit

The 270+ degree rotatable camera head is comprised of two >8K resolution, low noise cameras producing sharp and clear images, and an LED-based illumination system. The camera head is also capable of tilting, allowing for fixed OR set up with zero additional turn over time between right and left eye surgeries.

Designed for continuous innovation

Beyeonics One™ was developed as an open and evolving surgical platform. This approach allows for future integration with OR systems and data consolidation.

Beyeonics One™ is designed to deliver **seamless on-site and periodic updates**. Upon regulatory approval, the platform has the ability to deliver embedded future applications and products such as iOCT and advanced lens navigation software.

“Continued innovation will improve the system’s integration with EHRs, intraoperative OCT, and other imaging modalities.”

Jorge A. Fortun, MD, Associate Professor of Clinical Ophthalmology; Medical Director, Bascom Palmer Eye Institute at Palm Beach Gardens, Florida

A close-up, low-angle shot of a medical device, likely an operating microscope, showing the eyepieces and a portion of the body. The Beyeonics logo is visible on the side of the main body.

BEYEONICS

Beyeonics Vision is proud to partner with BVI in bringing Beyeonics One™ to practices across the US market.

BVI is refocusing the future of vision by adopting a surgeon-centric approach of listening to our customers and innovating around their needs. Beyeonics One™ elevates BVI's purpose-built portfolio of comprehensive surgical solutions for cataract and retina, as well as refractive, glaucoma, and dry eye, to deliver best-in-class partnership and service to our customers.

VITREORETINAL PORTFOLIO

BVI is committed to the development of technology that supports your advanced vitreoretinal surgical techniques. Our sales consultants are ready to work with you to understand your clinical needs and provide products that help optimize your patient outcomes.



**Drapes &
Covers**



Cannulas



**Single Use
Instruments**



ECP



Cryotreq™



**Laser &
Illumination**



**Micro Forceps
& Scissors**



**Backflush
Instruments**



Electrosurgery

CATARACT PORTFOLIO

BVI delivers high quality products that meet your surgical expectations and enable increased surgical throughput without compromising patient outcomes. Our sales consultants are readily available to understand your unique needs and help select the right product to help improve your surgical efficiency, consistency and outcomes.



**Drapes &
Covers**



Cannulas



**Knives
& Blades**



OVDs



**Single Use
Instruments**



**Intraocular
Lenses**



**Fluid
Control**

Reimagine your OR with CustomEyes®

CustomEyes every detail of the surgical pack to your exact specifications and maximize efficiency through the CustomEyes virtual, app-based configurator.



For more information about the vitreoretinal and cataract product portfolios, visit www.bvimedical.com



For more information about Beyeonics One™ in the US, contact a BVI sales consultant at 1-866-906-8080



**Scan the QR code
to learn more about
Beyeonics One™**

Visualization

Item	Specification
Working distance	200 - 350 mm
Field of Vision	40 – 80 mm x 21 – 42 mm [HxV]
IRIS	Electronic
Automation	Auto Focus, Auto Centering, Auto Brightness
Filter	532 nm optical filter for endolaser (optional)
Illumination	Stereo-Coaxial Illuminator 4000K° white Light Emitting Diode (LED)

Dimensions and weight

Item	Specification
Height	Up to 2.6 m Stow 1.93 m Camera Head Unit minimal height from floor 0.9 m
Dimensions (in stow position)	193 x 92 x 112 (h x w x l)
Base Footprint	82 x 82 cm
Total Weight	350 kg / 771.6 lbs

Connectivity

Item	Specification
Input	2 x HDMI Full High-Definition (FHD) video – not active
Output	2 x HDMI (1080p) video 1 x HDMI PC screen out

Surgical Headset

Item	Specification
Visor transparency	See-Through / Blocked (Electronic switchable)
Display	Equivalent to a 4K 3D 55" OLED display at a distance of 1.5 meters
IPD Range	Manual

Recording

Item	Specification
Channels	Left and Right HD (1920x1080)
Compression	H265/H264
Recording Options	One file, channels side by side One file, either channel Two files, one for each channel
Capacity	2 TB

“Beyeonics One™ offers something completely unique from other heads up systems—a well-balanced headset that puts you seemingly inside the eye with the freedom of head movement while keeping the field of view right in front of you.”

Dr. Jonathon Solomon, MD, Solomon Eye Physicians & Surgeons, Bowie, MD



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