



eye one™

The intuitive diagnostic  
ultrasound platform

B-SCAN, 40 MHZ UBM

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B-SCAN, 10 MHZ POSTERIOR

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A-SCAN, BIOMETRY

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A-SCAN, STANDARDIZED DIAGNOSTIC

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**Helping the world see clearly**

# The flexible, intuitive solution for ultrasound diagnosis

If you're searching for a customizable ultrasound platform that covers all examination and measurement scan modes in an easy-to-use, compact design, Eye One™ is the solution you're looking for.

**From diagnostic A-Scan to high-frequency B-Scan, Eye One™ delivers comprehensive capability to meet your ultrasound needs for both the posterior and anterior segments.**

## Custom configuration of scan modes

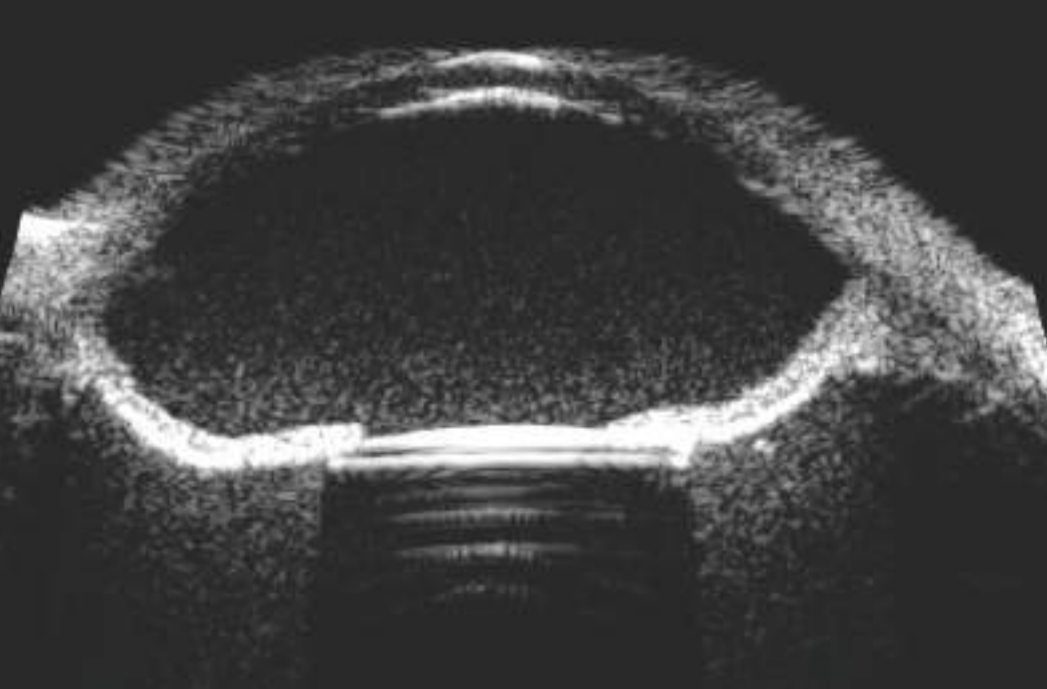
Choose Eye One™, and you can select from four scan modalities, which comprise:

B-SCAN, 40 MHZ UBM

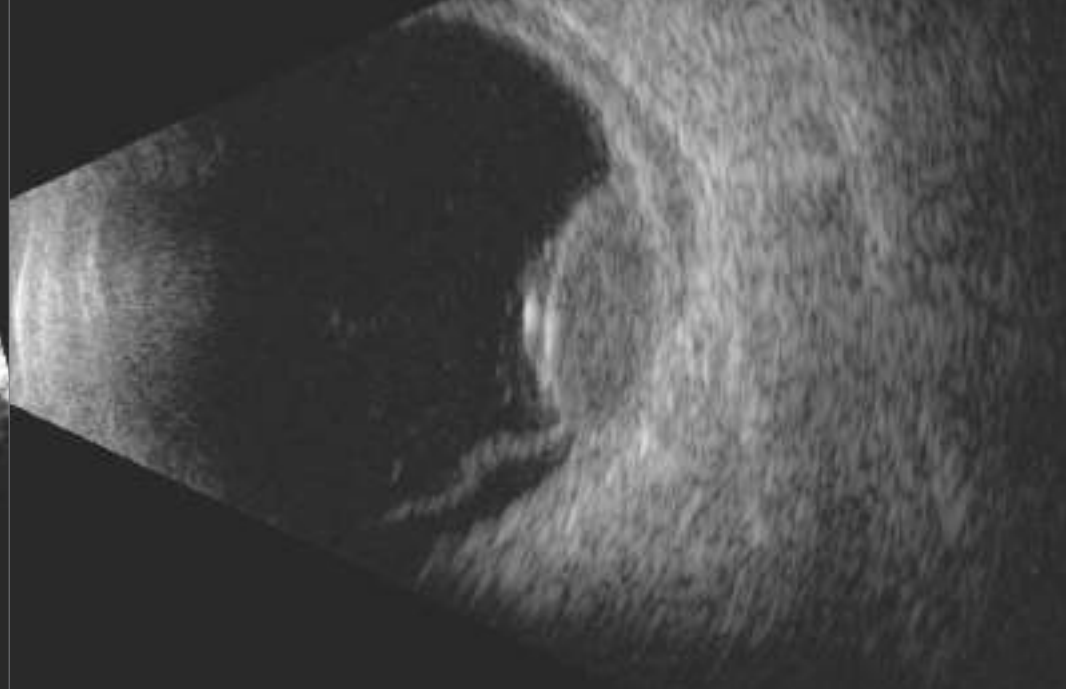
B-SCAN, 10 MHZ POSTERIOR

A-SCAN, BIOMETRY

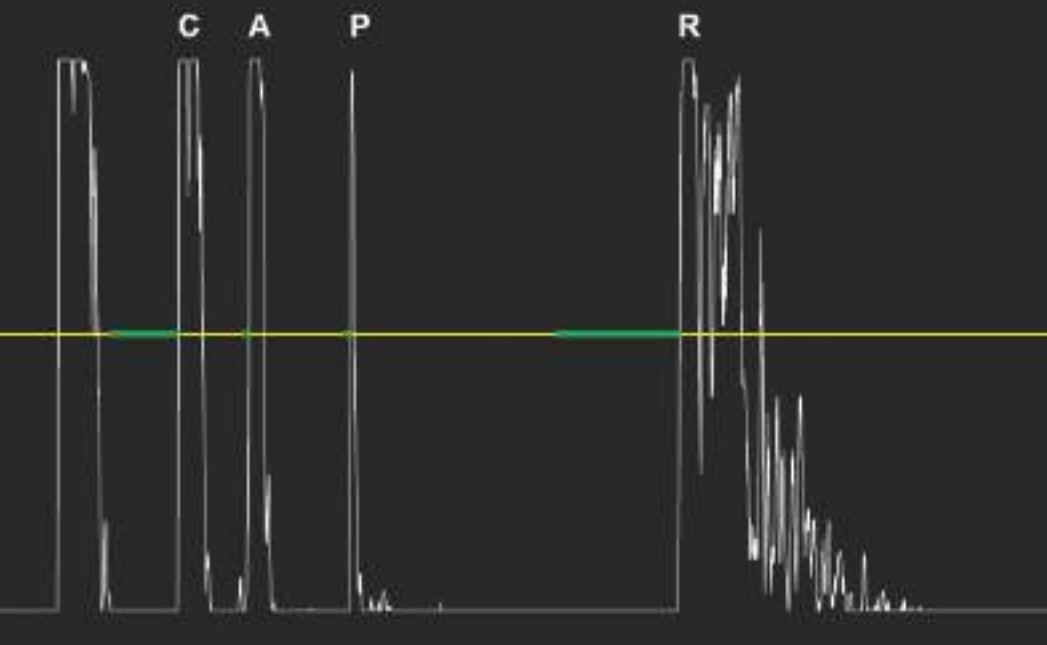
A-SCAN, STANDARDIZED DIAGNOSTIC



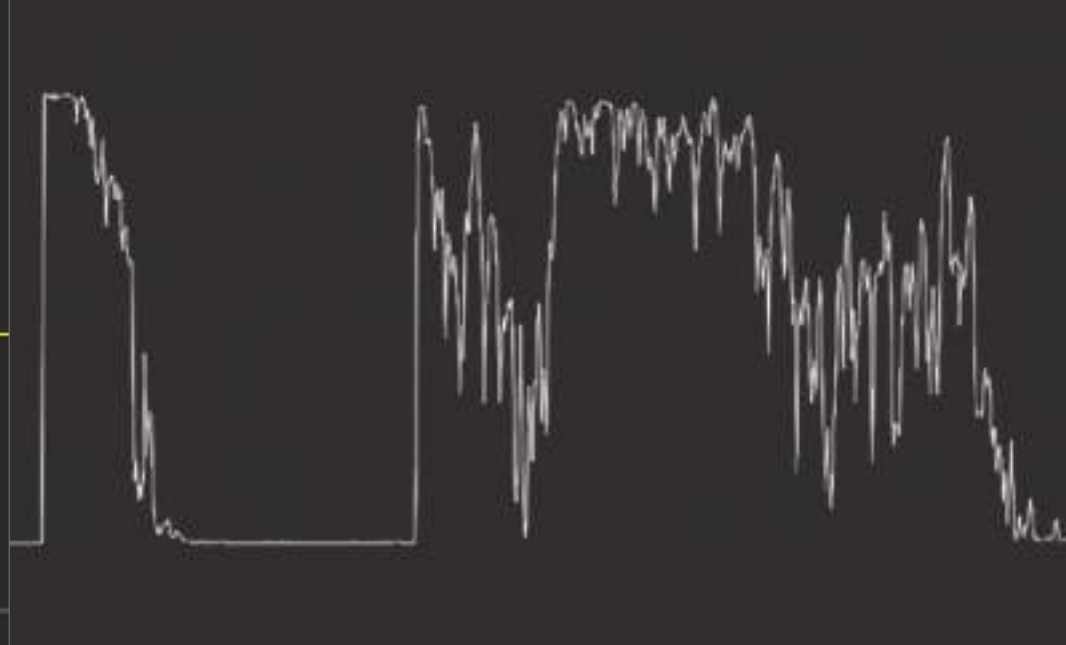
**B-Scan, 40 MHz UBM** — Hyphema with bowing of iris



**Caption: B-Scan, 10 MHz Posterior** — Choroidal Melanoma



**A-Scan, Biometry** — Axial Length Measurement



**A-Scan, Standardized Diagnostic** — Collar Button Melanoma

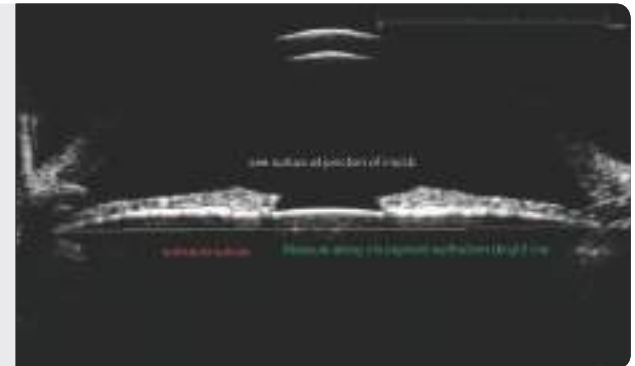
## Low noise, high performance

In posterior B-Scan mode, Eye One's industry leading signal-to-noise ratio means it's able to detect the subtlest vitreous echoes, offering unparalleled distinction and diagnosis accuracy across the retina, choroid, sclera, and the vitreo retinal junction.



## Every angle covered

In anterior wide-field mode, Eye One™ allows you to view the entire segment to identify and measure all structures present and accurately determine the next clinical steps required.



## Practical, powerful

With features including advanced movie mode technology, real-time image capture, a wide range of measurement and annotation tools and reporting capabilities and intuitive and easy-to-use software, Eye One™ delivers all the performance requirements you're looking for in a practical form that also offers the convenience of portability should you need it.



## Ultrasound: a critically important tool

Ultrasonography's unique imaging capability makes it a critically important diagnostic tool in ophthalmology. High-resolution ultrasound enables the interpretation of certain structures that cannot be seen as clearly with lower-resolution ultrasound systems. For clearer and sharper imaging, and better accuracy, high resolution is vital.

Further, the detection of disorders like posterior vitreous detachment (PVD) in opaque ocular media is easily achieved with B-Scan ultrasound. With the additional capability of video capturing, advanced ultrasound systems can be used to determine ocular structures more clearly — with the additional benefit that patients are able to better understand their condition.

## Ellex: a history of innovation in imaging

Ever since Ellex acquired Sacramento-based ophthalmic ultrasound pioneers Innovative Imaging Inc. in 2006, the company has worked hard to evolve the performance and application of the Eye Cubed™ ultrasound technology platform — and we continue to provide training in clinical ultrasound applications by expert echographers.



# Eye One™ key features — at a glance

## Highest Signal To Noise Ratio

With its market leading signal-to-noise ratio, Eye One™ reduces noise to a minimum at all frequencies. This ensures that details of even the finest ocular structures become visible – including blood and inflammatory cells. It also allows you to adjust the probe transmit energy level appropriate for the tissue under evaluation, refining the accuracy of your diagnosis of the subtlest echoes from vitreous opacities or blood cells.

## Advanced Movie Technology

Capture movies of up to 20 seconds duration with advanced movie mode technology. Replay at full speed, or review frame-by-frame for greater detail.

## Real-Time Imaging

Ultra fast image-sampling rate available, with an image acquisition and display rate of up to 25 frames-per-second. This provides a real-time view of detailed ocular activity, including blood cell movement and membrane behavior.

## Easy Measurement and Annotation

Key measurement and annotation tools for use during and after examination image assessments, including easy-to-use distance and angle measurement calipers. It also offers optimized reporting capabilities.

## Sulcus To Sulcus For ICL Sizing

40 MHz UBM probe provides a consistent, clear view of key anatomical landmarks to enable accurate sulcus-to-sulcus measurements. This allows you to determine proper ICL selection with a reduced risk of lens vaulting or displacement.

## Intuitive User-Friendly Software

Designed to accelerate practice workflow, including improved export and import functionality and expanded measurement options. Intuitive and easy-to-use, its software incorporates a customized report capability.

## An All-in-One solution

Cart-based configuration (optional accessory)

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This configuration combines the slimline Eye One™ Console with an All-In-One Windows® computer and a custom-built cart

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Ergonomic and user-friendly solution with height-adjustable work surface to accommodate both sitting and standing user preference

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Versatile in meeting the needs of multi-physician practices etc

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## All-in-One Computer

### Processor

Quad Core™ Intel® i7 (i.e. i& 6700T or i7 6700k)\*

### RAM

8GB

### Operating System

Windows® 10 Professional (64bit)

### Display

15.6 full HD (1920 x 1080), 4k not recommended

### Hard Drive

512GB or larger

*\*based on processors available today*

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## All-In-One Cart

### Height (with monitor)

59-67 inches (150-170 cm)

### Width

28 inches (71 cm)

### Depth

25 inches (63.5cm)

### Table size

18" d x 20" w (45.7 cm x 50.8 cm)



# Mode Specifications

## B-Scan Modes

Four sets of electronic distance measurement calipers with variable velocity  
 Two sets of electronic angle measurement calipers (variable velocity)  
 Movie sequence — real-time viewing and editing capability

### 10 MHz Posterior Segment

25 frames-per-second image acquisition rate  
 10-second movie loop capability  
 Adjustable transmit gain (minimum to 0 dB)  
 Adjustable receive gain (27-90 dB)  
 Adjustable dynamic range (Log, S1, S2, S3)  
 Scanning angle: 52 degrees  
 Image depth (displayed image): 48 mm  
 Focal depth: 25 mm  
 Image width at focal zone: 19-36 mm  
 Focal range 15-35 mm  
 Sealed Probe

### 40 MHz UBM Wide-Field Anterior Segment

13 frames-per-second image acquisition rate  
 20-second movie loop capability  
 Adjustable transmit gain (minimum to 0 dB)  
 Adjustable receive gain (27-90 dB)  
 Adjustable dynamic range (Log, S1, S2, S3)  
 Scanning angle: 30 degrees  
 Image depth (displayed image): 11.9 mm  
 Focal depth: 12.5 mm  
 Image width at focal zone: 15-18 mm  
 Focal range: 10.5-14.5 mm



## A-Scan Modes

### Axial Length Biometry A-Scan

Immersion or contact method

Solid focused probe with internal fixation light

Probe frequency: 10 MHz

Image depth: 40 mm

Points on x-axis: 2048

8 bit resolution

Steps of resolution: 256

Measurement accuracy: 50 microns inherent, 100 microns clinical

Automatic or manual scan acquisition

Built-in pattern recognition with automatic scleral echo detection

Statistics: average and standard deviation

Movie sequence adjustable up to 5 seconds

50 frames-per-second image acquisition rate

IOL power calculations and analysis:

- Holladay-I
- Haigis
- SRK-T
- Hoffer-Q

### Standardized Diagnostic A-Scan

Movie sequence adjustable up to 5 seconds

50 frames-per-second image acquisition rate

Two caliper measurements displayed in mm with variable velocities

Tissue sensitivity value stored in memory with reset function

Probe frequency: 8 MHz parallel beam

Measurement accuracy: 50 microns inherent, 100 microns clinical

# Accessories

## Prager Shells® for A-Scan Biometry

(Optional Accessories)

Prager Shells are available in:

15 mm Adult size

12.5 mm Pediatric size

## Scleral Shells for 40 MHz B-Scan

(Optional Accessories)

Scleral Shells are available in:

20 mm Adult size

18 mm Pediatric size

## ClearScan® Bag for 40 MHz B-Scan

(Optional Accessory)

ClearScan® is an innovative single-use ultrasound probe cover. Consisting of an extremely thin film that is acoustically invisible, ClearScan® provides distortion free ultrasound imaging with the added benefit of patient comfort. In addition, the conical shape of ClearScan® enables safe and effective examination of all eye quadrants without causing corneal abrasion.

## Ellex Probes

1. B-Scan: 40 MHz UBM Wide-Field
2. B-Scan: 10 MHz Posterior
3. A-Scan: 10 MHz Biometry
4. A-Scan: 8 MHz Standardized Diagnostic



# Hardware Specifications

## Network and Connectivity

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USB connectivity to off-the-shelf Windows® Notebook computer\*

New, easy-to-use GUI (graphical interface)

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## Data Management

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Data archiving and image export capability

Customized report capability

DICOM connectivity

Verification of multiple concurrent DICOM connections to other Application Entities (AEs)

Query / retrieval of modality work list (patient data from Electronic Medical Records – EMR)

Storage of DICOM objects to EMR / Picture Archiving and Communication Systems (PACS)

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## All-in-One Computer

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Processor: Quad Core™ Intel® i7 (i.e. i& 6700T or i7 6700k)\*\*

RAM: 8GB

Operating System: Windows® 10 Professional (64bit)

Display: 15.6 full HD (1920 x 1080), 4k not recommended

Hard Drive: 512GB or larger

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## Notebook Computer

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Processor: Quad Core™ Intel® i7

RAM: 8GB

Operating System: Windows® 10 Professional (64bit)

Display: 15.6 full HD (1920 x 1080)

Graphics: 2GB or higher video memory

Hard Drive: 512GB or larger

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## Eye One Console

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Slim line design with removable probe holders for easy cleaning

Footswitch control (scan start; scan stop; scan save)

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## Electrical Requirements

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Power supply: 100-240 VAC auto-ranging

Frequency: 50/60 Hz

Input power: 50 VA

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System Size (excl. computer): 19 x 11 x 6 inches (47.5 x 27 x 15 cm)

Weight (excl. computer): 11 lbs (5 kg)

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*\*Please consult your local Ellex Sales representative for more information.*

*\*\*Based on processors available today*



Find out how Eye One™ will meet your ultrasound needs for both the posterior and anterior segments.

### Contact us now to schedule a demonstration

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