eye cubed™

Your comprehensive ultrasound solution

- B-SCAN, 40 MHZ UBM
- B-SCAN, 10 MHZ POSTERIOR
- A-SCAN, BIOMETRY
- A-SCAN, STANDARDIZED DIAGNOSTIC

Helping the world see clearly

All your ultrasound requirements covered

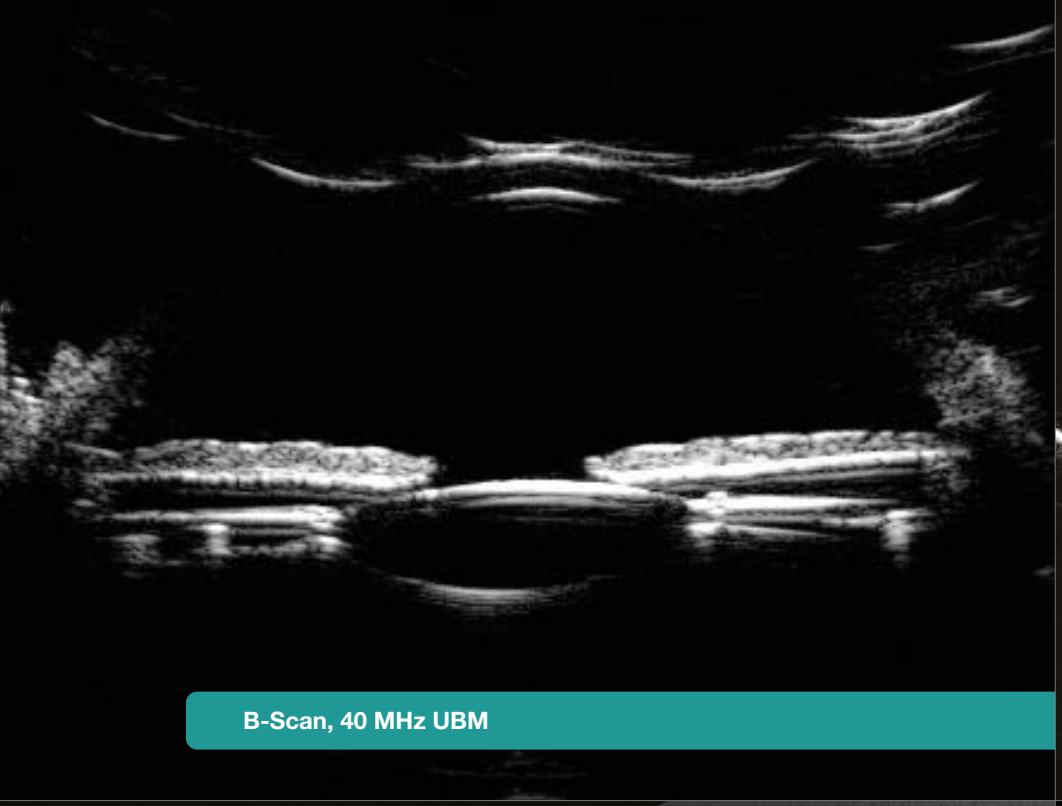
With customized configuration of A-Scan and B-Scan modes, Eye Cubed™ from Ellex covers all your diagnostic ultrasound needs for both the posterior and anterior segments.

Pre-op or post-op, A-Scan or B-Scan, retina or anterior segment: whatever your focus, Eye Cubed™ shows you more, in more detail, than any other device of its kind.

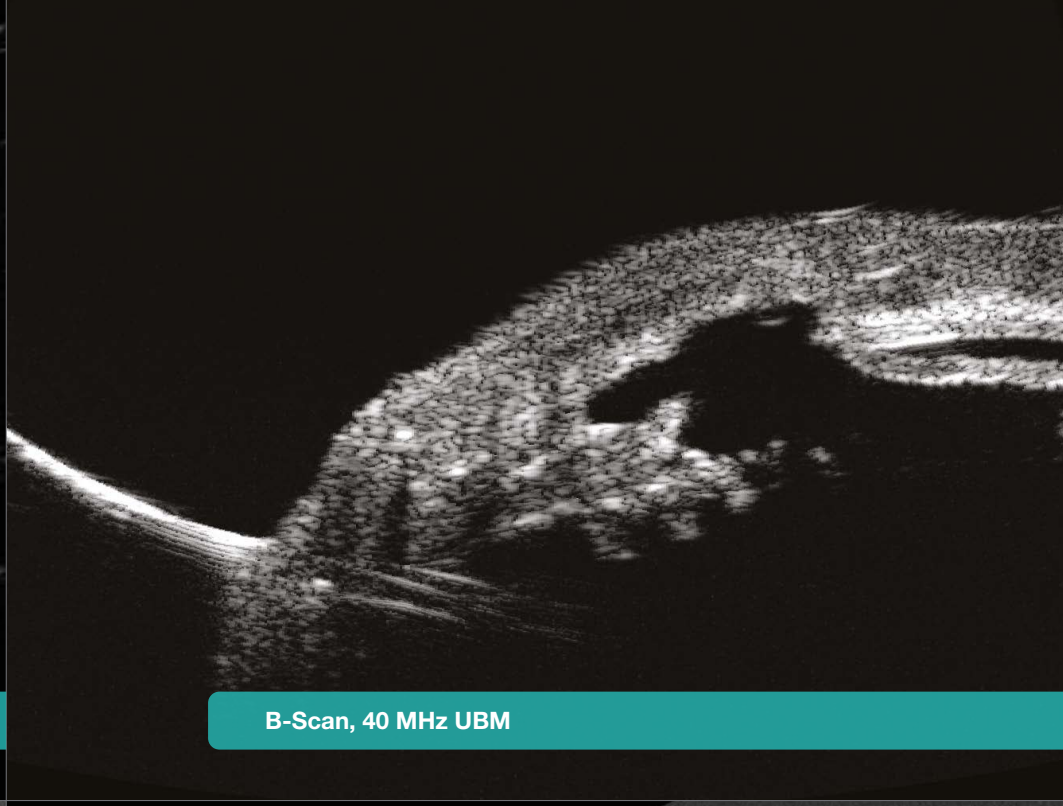
Custom configuration of scan modes

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

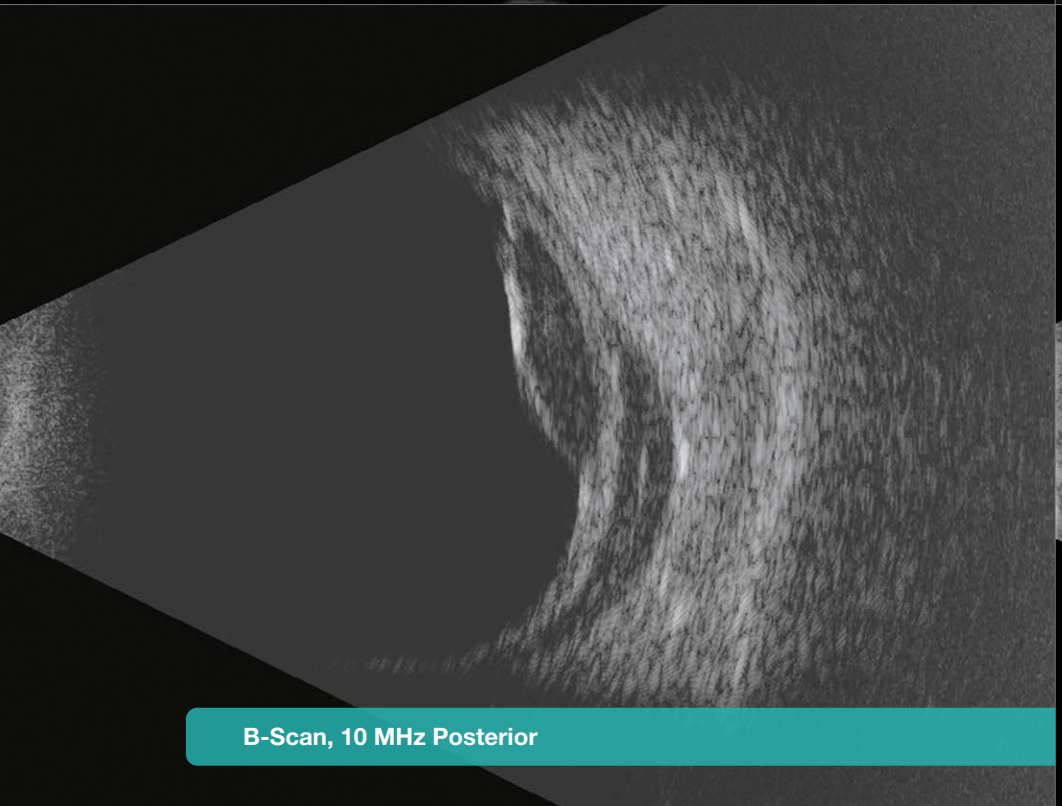
- B-SCAN, 40 MHZ UBM
- B-SCAN, 10 MHZ POSTERIOR
- A-SCAN, BIOMETRY
- A-SCAN, STANDARDIZED DIAGNOSTIC



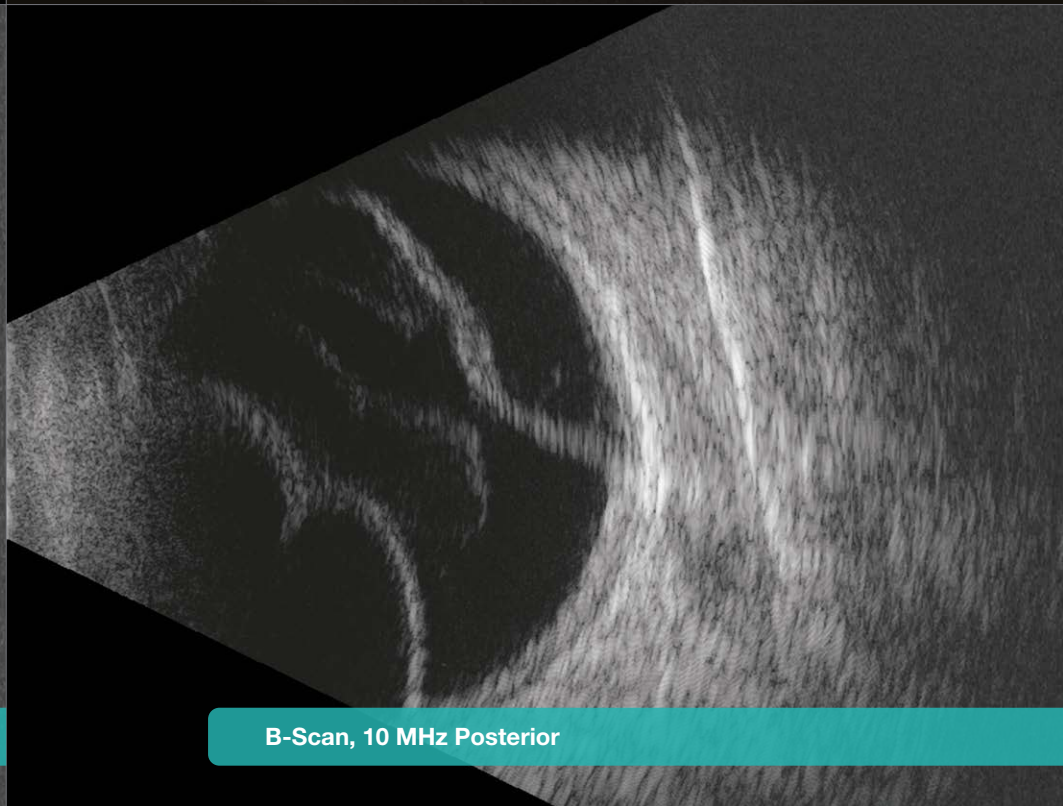
B-Scan, 40 MHz UBM



B-Scan, 40 MHz UBM



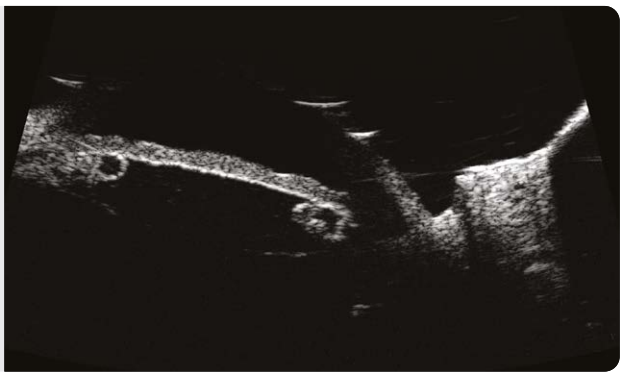
B-Scan, 10 MHz Posterior



B-Scan, 10 MHz Posterior

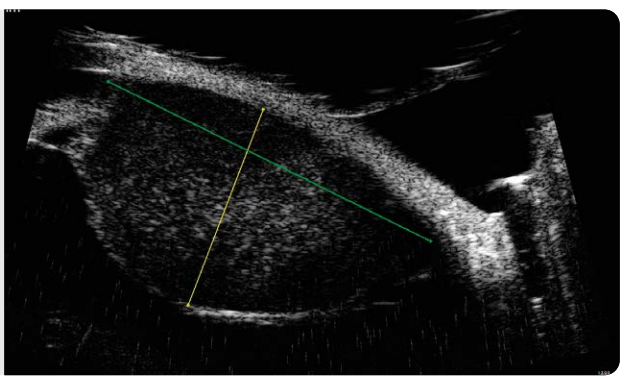
Ultra high performance

Eye Cubed's 40 MHz UBM mode means you can view anterior structures more clearly than ever before. Whether measuring the sulcus-to-sulcus for accurate ICL sizing, or the angle prior to YAG laser iridotomy, it's a capability that represents the very best in high-resolution ultrasound.



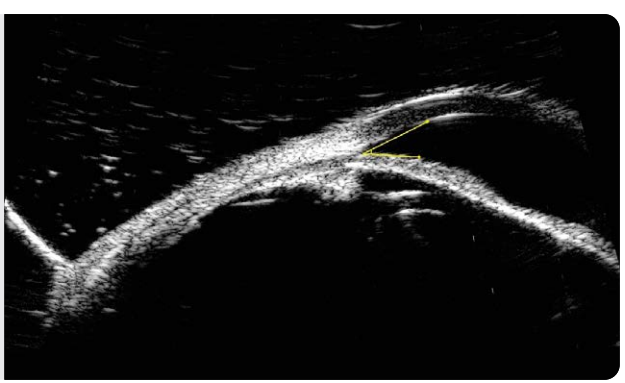
Fully featured

With features including advanced movie mode technology, real-time image capture, a wide range of measurement, annotation tools and reporting capabilities and intuitive, easy-to-use software, Eye Cubed™ will become a critically important asset to your practice for years to come.



Highest Signal-to-Noise Ratio

The unique amplifier and probe design of Eye Cubed™ provides the industry's highest signal-to-noise ratio. Eye Cubed™ delivers substantially more ultrasonic data per second than any other system. Because noise is reduced to a minimum, details of even the finest ocular structures become visible – including blood and inflammatory cells.



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 role of the Eye Cubed™ ultrasound technology platform — and we continue to provide training in clinical ultrasound applications by expert ecographers.

Eye Cubed™ key features — at a glance

Customized Configuration

Customized configuration of A-Scan and B-Scan modes ensures that Eye Cubed™ meets all your needs for both the posterior and anterior segments.

40 MHz UBM B-Scan
mode delivers accurate measurement and evaluation of the iris, angle and ciliary body, including sulcus-to-sulcus (ICL sizing) and IOL haptic placement

10 MHz Posterior B-Scan
mode produces the subtlest vitreous echoes, offering unparalleled distinction between the retina, choroid and sclera, as well as the vitreo retinal junction

Biometry A-Scan
delivers ultra-precise axial length measurement with faster, easier image acquisition in real-time movie mode

Standardized Diagnostic A-Scan
enables precision tissue differentiation

Advanced Movie Technology

Eye Cubed's advanced movie technology greatly improves the diagnostic capability and speed of each exam, allowing you to capture movies of up to 20 seconds in duration. Review movies frame-by-frame to reveal greater detail, or play them back in full movie mode.

High Speed Imaging for Real Time Display

With an image acquisition rate of up to 25 frames per second, Eye Cubed™ provides the fastest image-sampling rate available. This speed creates a real time view of detailed ocular activity, including blood cell movement and membrane behavior.

Custom Velocity Settings for Greater Precision

In addition to pre-programmed velocities for phakic, aphakic and four types of pseudo-phakic eyes, Eye Cubed™ enables you to adjust for all particular cases and program velocities accordingly.

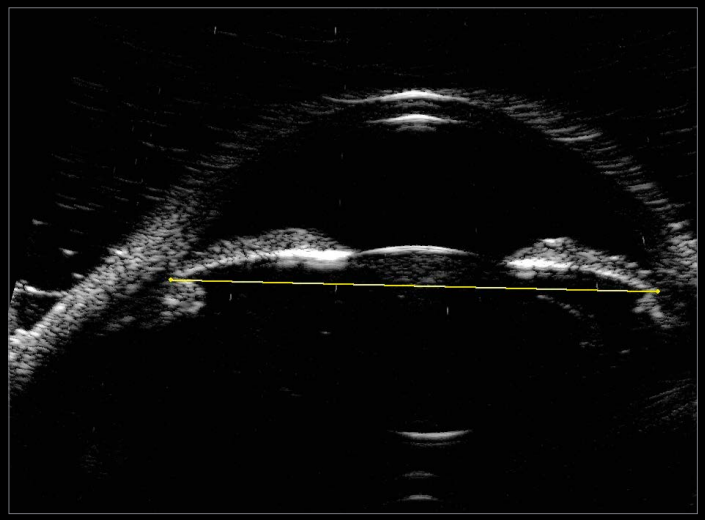
Sensitive Scan™ Transmit Energy Control for Greater Image Detail

Featuring Sensitive Scan™ technology, Eye Cubed™ enables you to adjust the probe transmit energy to ensure optimal tissue sensitivity. This gives you the ability to discern between the finest ocular structure, such as subtle vitreous opacities and sub retinal fluids.

Real Time Image Processing

A series of four image processing algorithms allow you to enhance each scan in real time – not after the fact. These algorithms are optimized for use in ophthalmic echography and have been developed by Ellex's in-house software engineering team to deliver greater image control. Choose your preferred interpolation method from a number of options, including:

- Lowest neighbor
- Linear interpolation
- Bilinear interpolation
- Cubic interpolation



Eye Cubed: sulcus-to-sulcus measurement

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	40 MHz UBM Wide-Field Anterior Segment
25 frames-per-second image acquisition rate	13 frames-per-second image acquisition rate
10-second movie loop capability	20-second movie loop capability
Adjustable transmit gain (minimum to 0 dB)	Adjustable transmit gain (minimum to 0 dB)
Adjustable receive gain (27-90 dB)	Adjustable receive gain (27-90 dB)
Adjustable dynamic range (Log, S1, S2, S3)	Adjustable dynamic range (Log, S1, S2, S3)
Image depth (displayed image): 48 mm	Image depth (displayed image): 11.9 mm
Focal range: 15-35 mm	Focal range: 10.5-14.5 mm
Focal depth: 25 mm	Focal depth: 12.5 mm
Image width at focal zone: 19-36 mm	Image width at focal zone: 15-18 mm
Scanning angle: 52 degrees	
Sealed probe	

A-Scan Modes

Axial Length Biometry A-Scan	Standardized Diagnostic A-Scan
Immersion or contact method	Two caliper measurements displayed in mm with variable velocities
Solid focused probe with internal fixation light	Tissue sensitivity value stored in memory with reset function
Probe frequency: 10 MHz	Probe frequency: 8 MHz parallel beam
Image depth: 40 mm	Measurement accuracy: 50 microns inherent, 100 microns clinical
Points on x-axis: 2048	
8 bit resolution	
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	

Accessories

A-Scan Probes

8 MHz probe for standardized diagnostic

10 MHz focus probe with internal fixation light for biometric A-Scan

B-Scan Probes

8 MHz probe for standardized diagnostic

10 MHz focus probe with internal fixation light for biometric A-Scan

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 ClearScan® conical shape enables the safe and effective examination of all eye quadrants without causing corneal abrasion. ClearScan® is a registered trademark of ESI, Inc.

ClearScan® and Prager® are registered tredemarks of ESI, Inc.

Hardware Specifications

Network and Connectivity

Six USB 2.0 ports for memory sticks and peripherals

Fully network and printer-ready (gigabit Ethernet)

Purpose-built Windows embedded operating system

Multilingual user interface

Data Management

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)

Hardware Features

Footswitch control (scan start, scan stop, scan save, etc.)

Removable one-terabyte hard drive

Wide screen, 1920 x 1200 high-resolution monitor

Electrical Requirements

Power supply: 100-240 VAC auto-ranging

Frequency: 50/60 Hz

Input power: 220 VA

System Size: 15.5 x 17 x 6.5 inches (39 x 43 x 16.5 cm)

Weight: 26 lbs. (12kg)

eye cubed™

Find out how Eye Cubed™ shows you more, in more detail, than any other ultrasound device of its kind.

Contact us now to schedule a demonstration

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