

# LIGHTSonic Ultrasound

A-Scan | B-Scan | UBM



PREMIER OPHTHALMIC  
ULTRASOUND SOLUTIONS



# LIGHTSONIC ULTRASOUND

## A-SCAN | B-SCAN | UBM



LIGHTSonic Ultrasound provides exceptional operational simplicity; yet, features some of the most sophisticated imaging and editing functions with fast, real-time processing power. LIGHTSonic Ultrasound is configurable for A-Scan, B-Scan and/or UBM modalities.



A-Scan

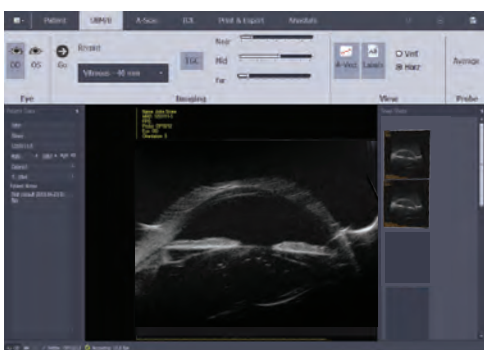
### Enhanced A-Scan, B-Scan & UBM Biomicroscopy

**A-Scan** ultrasound biometry provides ocular axial length data, which is critical for intraocular lens (IOL) calculations prior to cataract surgery. Additionally, A-Scan technology is used to determine the size and characteristics of ocular masses and opacities for optimal diagnosis of intraocular pathology.



B-Scan

**B-Scan** ultrasonography offers real-time imaging with HFR (high frame rate) functionality for a detailed, cross-sectional view of the eye and the orbit. B-Scan images allow physicians to better visualize and differentiate structures and pathologies, especially when the view during examination is compromised by a dense opacity such as a vitreous hemorrhage or a mature cataract.



UBM

**UBM** mode provides an excellent platform for both anterior segment morphology and structures posterior to the iris. UBM is invaluable in detecting masses in the ciliary body region that may otherwise not be discernable on exam and also in differentiating between cystic and solid lesions. In glaucoma management, UBM provides high-resolution structural details of the angle, allowing for a refined assessment of angle closure, pupillary block and iris plateau. UBM also provides enhanced visualization of trabeculotomy filtering blebs and tube shunts in patients who are status-post filtration surgery.

# SUPERIOR IMAGE QUALITY AND DATA MANAGEMENT IN A PORTABLE DESIGN

LIGHTSonic Ultrasound's proprietary digital scanner technology, with industry's highest signal ratio intensity, offers a more refined and easier to label echogram of the anterior chamber and other ocular structures.

## Imaging Redefined

LIGHTSonic Ultrasound introduces innovative, state-of-the-art digital platform technology, which redefines screening and imaging performance, offering increased frame rates, unrivaled resolution and a wider field of view.

- Videos: 600 frames per eye
- Snapshots: 10 per eye
- 60° scan angle
- Fully adjustable TVG
- Axial & longitudinal scan clock



Compact Carry Case

## Advanced Data Management

LIGHTMED's intuitive and easy-to-use software offers an advanced, built-in physician and patient database provides users the ability to sort and analyze physician and patient information. Additionally, LIGHTSonic Ultrasound provides various labeling, custom reporting and archiving tools to enhance the user's experience, such as adding and removing videos, and saving video clip frames as photos to edit with annotation.

- DICOM
- EMR, HL7
- Wi-Fi connectivity
- PDF, JPEG, AVI reporting
- Compatible with most PC and USB printers (not compatible with Mac)

## A Smarter Portable Design

LIGHTSonic Ultrasound exceeds the expectations of physicians with the ergonomic and user-friendly design.

- 10.4" high-resolution, multi-touch monitor
- Desk kickstand
- Articulated VESA arm
- 2 key footswitch
- HDMI input allows connection of LIGHTSonic Ultrasound with secondary screen for extended or advanced diagnosis platform
- Easily upgradable software



2 Key Footswitch

# LIGHTSonic Ultrasound

## Technical Specifications

Operating System	Microsoft Windows 10
Console	10.4" high-resolution multi-touch monitor (1024 x 768 pixels)
Power	100 - 240 VAC, 50/60 Hz auto-switching medical-grade power supply, 60W max
Patient Database	DOB, Referring Doctor, Gender, Patient Name, Examination Date, Pathology
Operating Temperature	15°C - 30°C, 59°F – 86°F
Storage Temperature	0°C – 50°C, 32°F – 122°F
Atmospheric Pressure	0.7 Bar – 1.05 Bar
Product Dimensions	20.3 cm (H) x 32.3 cm (W) x 7.6 cm (D)
Product Weight	2.9 kg
Probe Position Label	12-hour clock
Gain Control	TGC
Data Storage	1) Dicom 2) Hard Drive with SSD 128G 3) External USB Storage Drive
Videos	600 frames per eye, 10 min total recording time
Snapshots	10 per eye
Annotation	Automatic Annotation
Measurements	Distance, Angle, Area, Pointer, Text
EHR Connectivity	DICOM
Windows Integration	Full screen
Footswitch	2 Key footswitch
Export Images	PDF, JPEG, AVI

### A-Scan Specifications

#### 10 MHz Probe

Active Element Diameter	4 mm
Operating Frequency	10 MHz
Focal Length	25 mm
Axial Resolution	0.019 mm @ 1555 m/sec (distance between samples)
A-Scan Measurement Range	Maximum 39.81 mm @ 1555 m/sec, no minimum
A-Scan Measurement Accuracy	± 0.1 mm
A-Scan Measurements	AXL, ACD, Lens, VCD
A-Scan Measurement Modes	Aphakic, Phakic, Dense Cataract, Pseudo Acrylic, Pseudo Silicone, Pseudo PMMA, Silicone Filled, User 1, User 2
A-Scan IOL Formulas	Haigis, Hoffer Q, Holladay 1, SRK-T, Post Refractive (1 - Clinical History, 2 - Contact Lens, 3 - Refraction Derived, 4 - Shammis Regression F)

### B-Scan Specifications

#### 12 MHz Probe

#### 20 MHz Probe

Active Element Diameter	7.0 mm	5.5 mm
Probe Center Frequency	11 MHz ± 10%	17.5 MHz ±10%
Focus	21 mm ± 2 mm	21 mm ± 2 mm
Depth of Field	14 mm to 37 mm	15 mm to 35 mm
Resolution	Axial 0.149 mm Lateral 0.42 mm	Axial 0.106 mm Lateral 0.42 mm
Scan Angle Displayed	60° in image	60° in image
Frame Rate (one way)	20 Hz max @ 60° scan	25 Hz max @ 60° scan

### Measurement Accuracy

#### Accuracy Range

Electronic Resolution	± 0.03 mm
Overall System	± 0.15 mm

### UBM Specifications

#### 35 MHz Probe

#### 50 MHz Probe

Active Element Diameter	7.0 mm	7.0 mm
Operating Frequency	35 MHz ±10%	42 MHz ±10%
Focus	12.8 mm	12.8 mm
Depth of Field	11.5 mm to 14 mm	11.5 mm to 14 mm
Resolution	Axial 0.035 mm Lateral 0.080 mm	Axial 0.021 mm Lateral 0.060 mm
Scan Angle Displayed	20° in image	20° in image
Frame Rate (one way)	15 Hz max @ 60° scan	30 Hz max @ 60° scan

## Optional Accessories

- ClearScan® Probe Cover for UBM
- Prager Shell® 14.9mm diameter
- Prager Shell® 12.5mm diameter
- Prager Shell® Tubing Kit (25 units per box)
- Storage/Soaking Tray for A-Scan
- Articulated VESA Arm

Specifications are subject to change without notice. LIGHTMED devices are made strictly in accordance with the international ultrasound safety regulations and standards: EN60601-1, EN60601-1-2, EN60601-2-37.



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