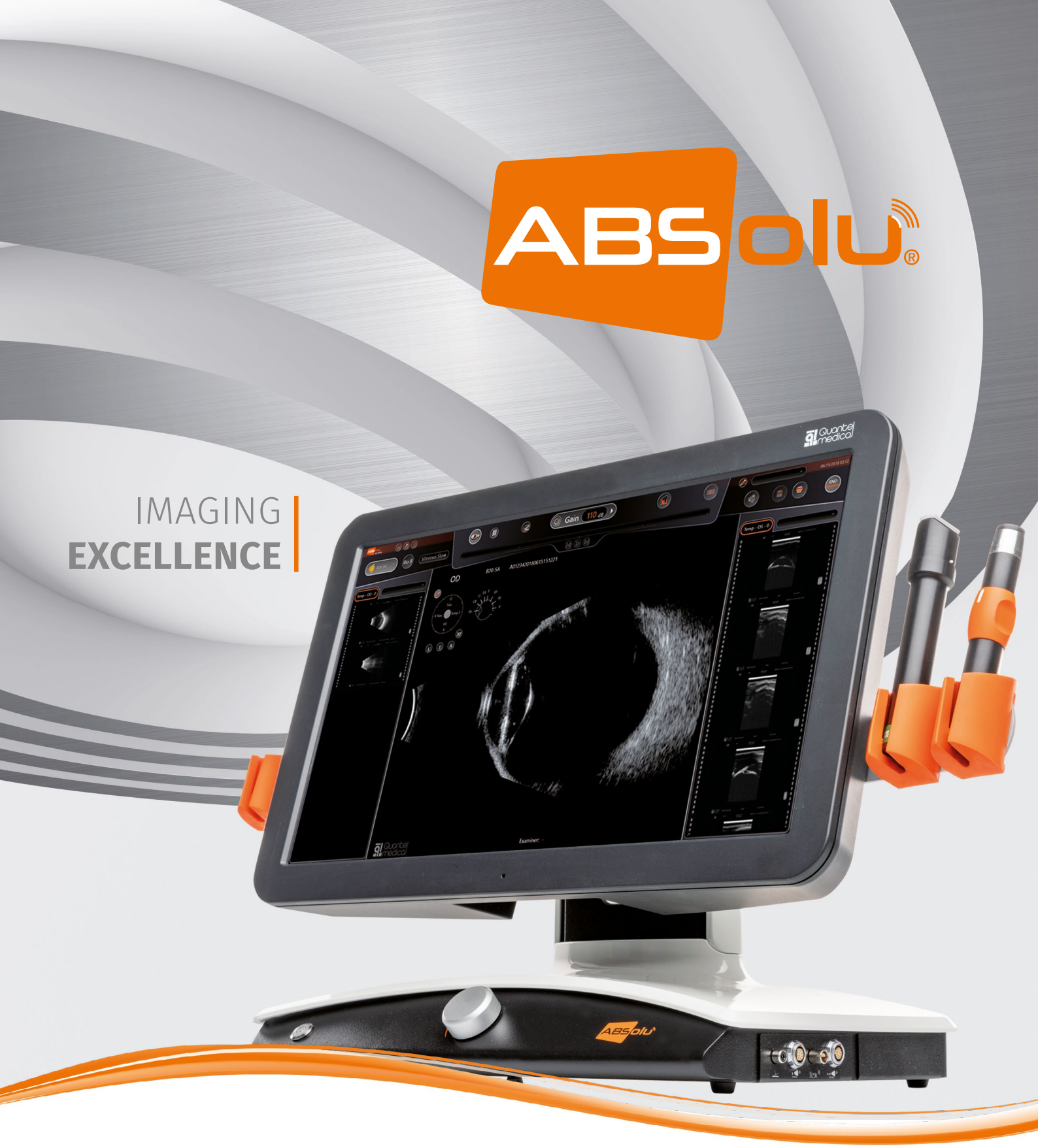
ABSolu®

IMAGING
EXCELLENCE



LUMIBIRD® MEDICAL

A/B/S/UBM Ultrasound Platform

ABSolu®

B20-5A

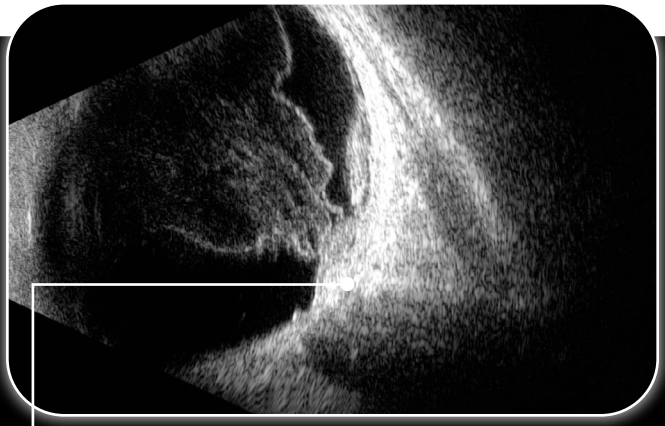
INNOVATIVE ANNULAR IMAGING

Quantel Medical has made a decisive leap forward with a new 5 ring annular technology on a 20 MHz probe.

The principle is to **emit alternating ultrasounds** by **5 concentric transducers** located in a single probe.

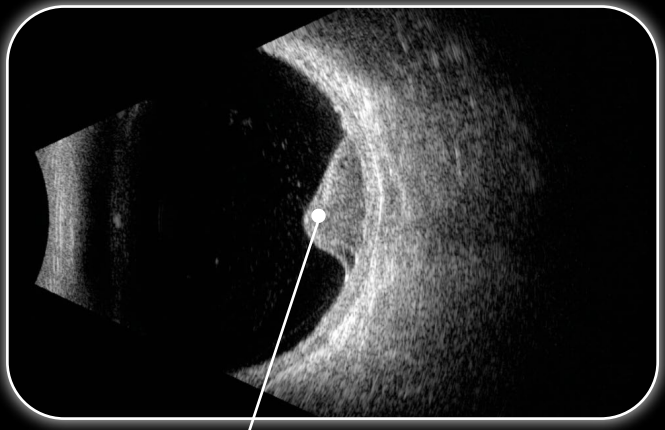
This technology:
- increases the depth of field,
- improves the lateral resolution from 250 to 200 µm i.e. 25%
- maintains high axial resolution.

The **entire eye is now visible** with an exceptional level of **detail**.

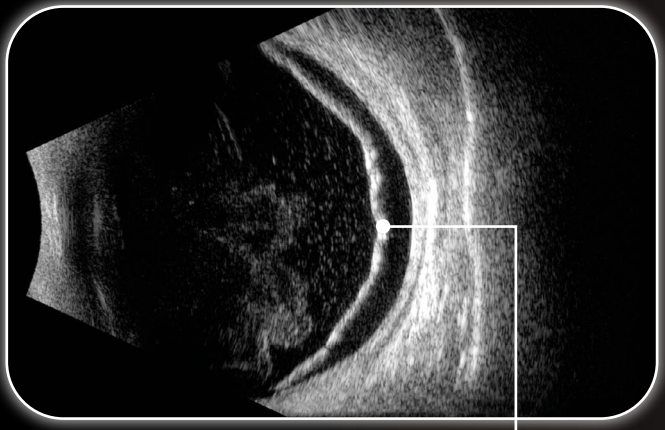


MACULAR PSEUDOTUMOR, BLEEDING CHOROIDAL NEOVASCULAR MEMBRANE, KUHNT JUNIUS DISEASE

MACULAR CYSTOID EDEMA IN DIABETES MELLITUS



CHOROIDAL MELANOMA

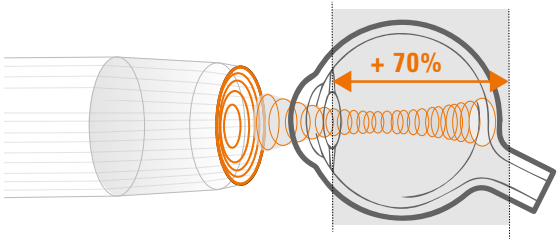


RETINAL DETACHMENT

* ©Photos courtesy Prof. Dr. med. Mario de La Torre

A SINGLE MULTIFUNCTION PROBE

The annular technology almost **doubles the depth of field : the 20 MHz annular probe increases the depth of field by 70%** and makes it possible **to simultaneously examine** pathologies of the **vitreous**, the **retina** and beyond without compromising on image quality.

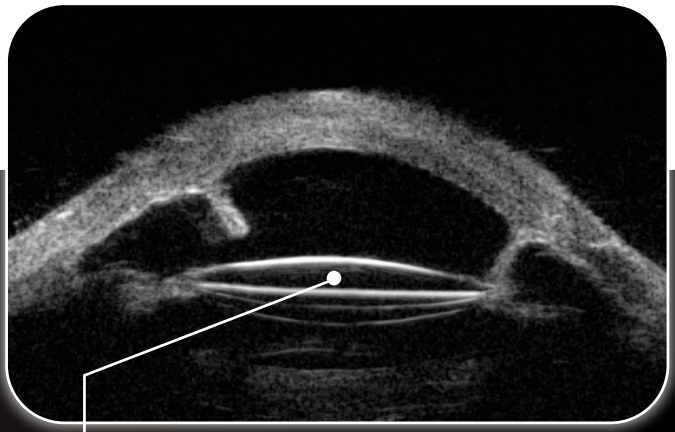


UBM

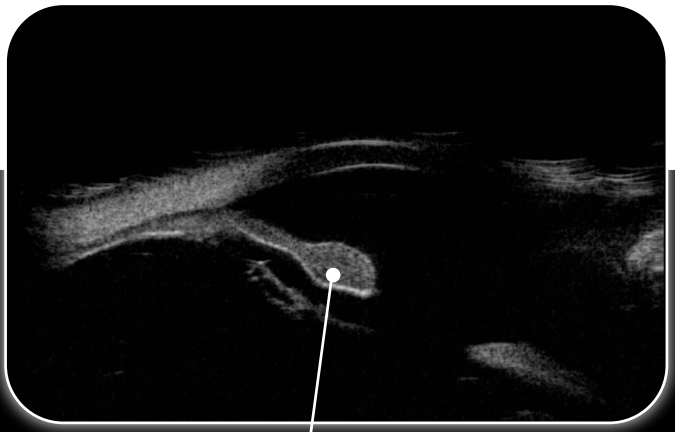
OPTIMIZED UBM IMAGING

UBM technology makes it possible **to diagnose the structures behind the iris**, that other technologies cannot visualize. Quantel Medical now offers **optimized UBM technology**:

- **improved signal processing for enhanced resolution and penetration,**
- **linear transducer motion to optimize image quality,**
- electromagnetic technology to increase speed acquisition and comfort of use,
- **Clearscan**™ compatible for fast and comfortable examination.



IOL IN SITU PLUS ANTERIOR SYNECHIA

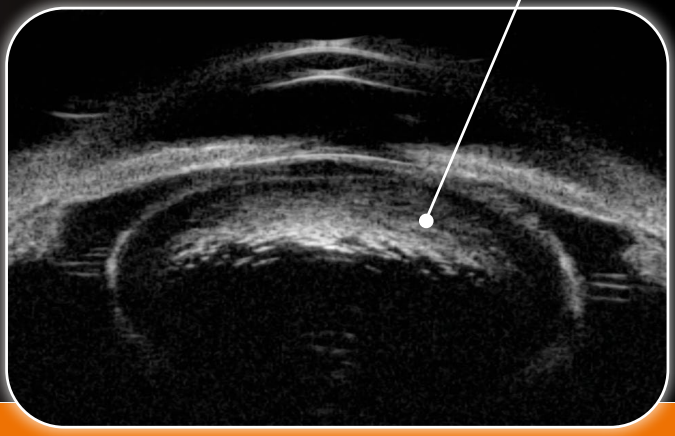


IRIS TUMOR

GLAUCOMA MODULE

Semi-automatic quantification tools are available on ABSolu® (AOD, TIA, IT, ARA, LV) to **facilitate examination** and to **understand the mechanisms of the iris,** the **lens** and the **ciliary bodies** in glaucoma patients.

PHACOMORPHIC GLAUCOMA



PUPILLARY BLOCK

* © Photos courtesy Prof. Dr. med. Mario de La Torre

STS MODULE*

For anterior chamber IOLs, the STS option allows the viewing of the entire anterior chamber in one single scan. The anatomy of the anterior chamber can be efficiently checked and the angle to angle measurement easily performed.

This option is being considered on ABSolu® for Sulcus to Sulcus measurements prior to Implantable Collamer Lens (ICL) surgery. The optional STS module allows an automatic measurement of the sulcus-to-sulcus, lens curvature and anterior chamber depth.

Quantel Medical, a brand of **Lumibird Medical**,
the **world leader** in **ophthalmic ultrasound**

A-SCAN BIOMETRY AND B MODE BIOMETRY

The A-scan biometry and B mode biometry modules **facilitate measurement of the axial length** on **all types** of eyes:

- moderate to dense cataract,
- long eyes or posterior staphyloma.

The ProBeam™ probe* (biometric probe with projected laser beam) facilitates measurement and enables better patient cooperation during the examination.

USER INTERFACE

The **ABSolu's user interface** is **intuitive** and **easy to use**. It shortens the learning curve and makes it more **playful to use**.

- A **wide range** of **measuring tools.**
- **A dual mode display** for comparison of exams.
- Fully configurable patient **report generator**.

ABSolu® is EMR compatible and connects to most data transfer and storage applications.

INTEGRATED MOTION SENSOR IMUv®

The B15, B20-5A and UBM probes are equipped with a position sensor **IMUv®** that provides **real-time informations**:

- the position of the probe on the eye,
- the visualization of the explored area.

This helps the operator to easily and quickly identify the area of examination.

THIS **TECHNOLOGY** IS **PATENTED** AND **EXCLUSIVE**.

STANDARDIZED ULTRASOUND*

ABSolu® remains the only ultrasound platform that meets the criteria defined by Prof. Dr. Karl C. Ossoinig.

The **S mode allows for**:

- diagnosis of tumor lesions,
- diagnosis of retinal/vitreous membrane detachment,
- diagnosis of Graves' disease.

DICOM IMAGING

A world premiere in ophthalmic ultrasound: new Full HD screen with greyscale display compliant with part 14 of the **DICOM standard.**

- **Constant** and standardised image **quality,**
- **Reliable** image **interpretation.**

(*) Option

TECHNICAL SPECIFICATIONS

B SCAN MODES

Grey levels:	256
Adjustable gain:	20 to 110 dB
Adjustable Time Gain Control (TGC):	0 to 30 dB
Adjustable dynamic range:	adjustment from 25 to 90 dB (for 15 and 50 MHz - 80 dB for 20 MHz 5A)
Image post-processing tools:	filters (algorithm and colors), calipers, areas, angles, markers, comments
Glaucoma quantifying semi-automated tools:	AOD 500 & 750, TIA, IT 750 & 2000, ARA 500 & 750, TISA 500 & 750, LV
Cineloop in B mode:	up to 400 images

POSTERIOR POLE EXAMINATION

Magnetic 15 MHz probe

Transducer frequency:	15 MHz
Angle of exploration:	50°
Depth of exploration:	60 mm (2.36")
Focus:	24 mm (0.94")
Depth of field:	12 mm (0.47")
Axial resolution:	115 µm
Lateral resolution:	400 µm
Frame rate acquisition:	up to 16 Hz

Accelerometer for probe localization - IMUv®

Magnetic Annular 5 rings 20 MHz probe

Transducer frequency:	20 MHz – Annular 5 rings
Angle of exploration:	50°
Depth of exploration:	40 mm (1.57")
Focus:	22 mm (0.87")
Depth of field:	20 mm (0.79")
Axial resolution:	80 µm
Lateral resolution:	200 µm
Frame rate acquisition:	up to 16 Hz

Accelerometer for probe localization - IMUv®

UBM & ANTERIOR SEGMENT EXAMINATION

Magnetic 50 MHz UBM probe with linear scanning

Transducer frequency:	50 MHz
Linear transducer movement:	16 mm (0.63")
Focus:	10 mm (0.39")
Axial resolution:	35 µm
Lateral resolution:	60 µm

Accelerometer for probe localization - IMUv®
STS module*

STANDARDIZED A MODE*

Digitally programmed S-shaped amplifier characteristics and comprehensive design criteria for standardized echography and tissue differentiation according to Prof. Dr. Karl C. Ossoinig. Automatic tissue sensitivity determination with specific gain value recorded.

Diagnosis functions featuring:	LESION Q-I, Retina A1, Retina QII, Musc. profile with Optic Nerve measurements
Probe Frequency:	8 MHz parallel beam
Cineloop in A mode:	up to 400 images
Depth:	orbit 80 µs, eye 40 µs, zoom 20 µs

Distance measurement between 2 gates with adjustable velocity.

(*) Option

BIOMETRY

Adjustable gain:	20 to 110 dB
Adjustable Time Gain Control (TGC):	0 to 30 dB

11 MHz Probe

Transducer frequency:	11 MHz
Tip diameter:	7 mm (0.28")
Electronic resolution:	0.04 mm (0.0016")
Depth of exploration:	40/80 mm (1.57"/3.15") on 2048 points
Aiming beam:	LED or laser beam ProBeam™

Contact and immersion techniques compatible

Axial length measurements

Ultrasound propagation velocity adjustable per segment (anterior chamber, lens, vitreous) and IOL and vitreous material

Built-in pattern recognition:	Phakic, Dense/Long, Aphakic, PMMA, Acrylic and silicon for pseudo-phakic eyes
Acquisition modes:	Automatic, Auto+save, Manual Automatic detection of scleral spike

Automatic calculation of standard deviation and average total length (series of 10 measurements)

IOL calculation

SRK-T, SRK 2, HOLLADAY, BINKHORST-II, HOFFER-Q, HAIGIS
Post-op refractive calculation:
- Pre-op and Post-op refraction, Pre-op and Post-op keratometry
- 6 different methods for keratometric correction and implant calculation: History derived, refraction derived, contact lens method, Rosa regression, Shammas regression, Double K/SRK-T (Dr. Aramberri's formula)

9 values bracketed for desired ametropia for each IOL (IOL increment steps: 0.25D or 0.50D)
Simultaneous display of 4 different IOL calculations

DATA MANAGEMENT

Built-in physician and patient database
Exportation of still images and video sequences
Customizable digital and printed reports
DICOM* and/or EMR compatible
Compatible with PC, USB video and DICOM printers
Storage capacity: no restriction of number of exams per patient

GENERAL INFORMATION

Languages: Chinese, English, French, German, Japanese, Polish, Spanish
Connection 5 USB ports (1 on the base – 4 on the bottom of the screen)
HDMI and Ethernet ports
Windows 10 embedded exploitation system
HDD 1TB - SSD 128 Gb – RAM 16 Gb
No restriction of storage in patient file

Electrical requirements

Power supply:	80-264 Vac
Frequency:	47/63 Hz
Power:	65 VA max

Features

Overall dimensions:	Height 445 mm (17.52") - Depth 285 mm (11.22") - Width 545 mm (21.46") (W/O probe holders) and 840 mm (33.07") with all probes
Screen dimensions:	21" inches HD (1920*1080p)
Weight:	10.6 kg (23.37 lbs) (w/o probes)

XE_ABSOLU_BC6_AN_230905 Artwork : www.overscan.fr

CE 0459

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