

ABSolu®

IMAGING
EXCELLENCE





B20-5A

■ INNOVATIVE ANNULAR IMAGING

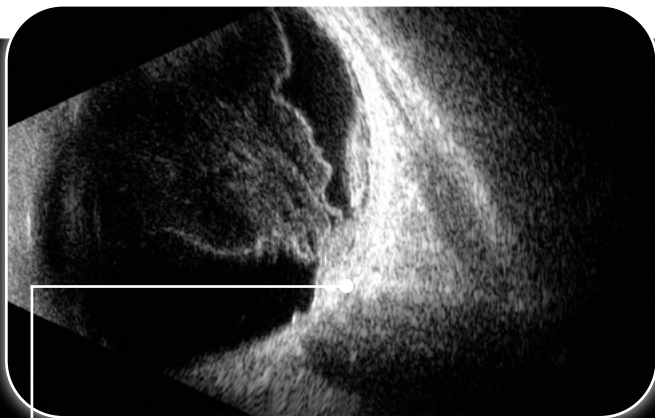
Quantel Medical has made a decisive leap forward with a new 5 ring annular technology on a 20 MHz probe.

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

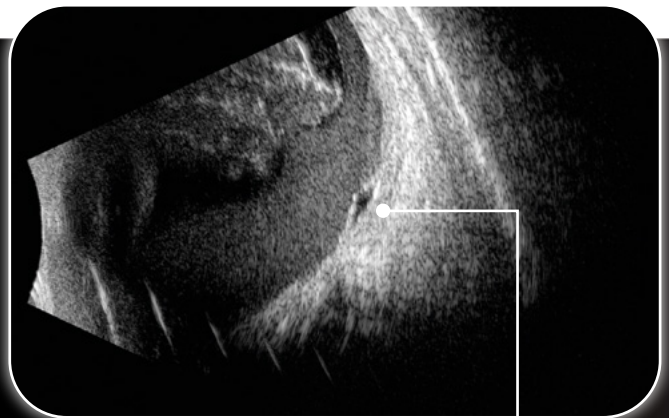
This technology:

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

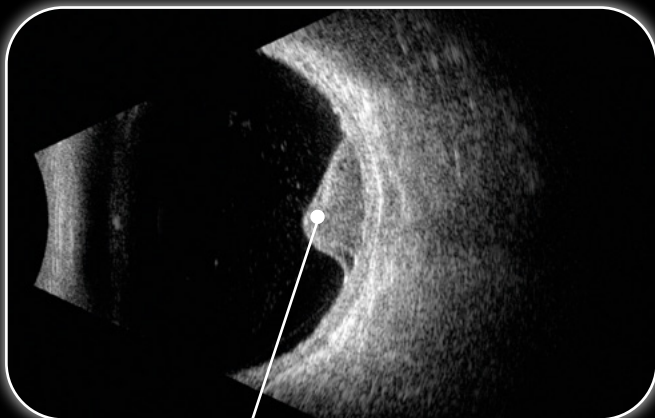
The **entire eye is now visible** with an exceptional level of detail.



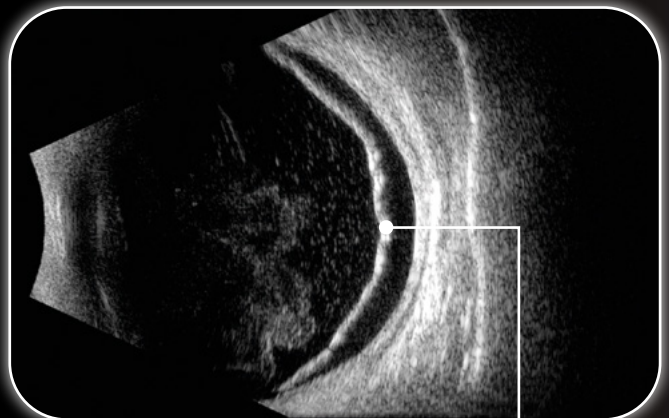
● MACULAR PSEUDOTUMOR, BLEEDING CHOROIDAL NEOVASCULAR MEMBRANE, KUHN-JUNIUS DISEASE



● MACULAR CYSTOID EDEMA IN DIABETES MELLITUS



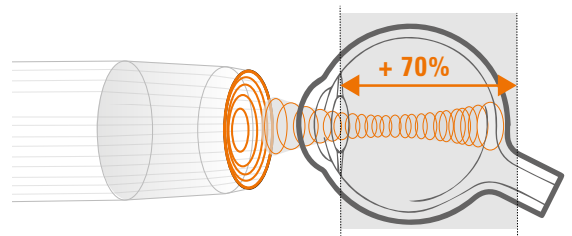
● CHOROIDAL MELANOMA



● RETINAL DETACHMENT

■ 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

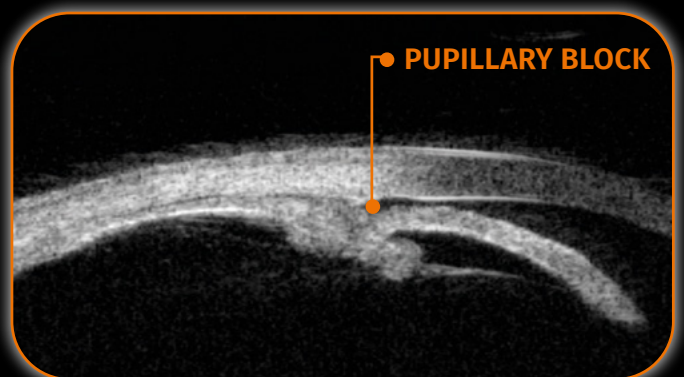
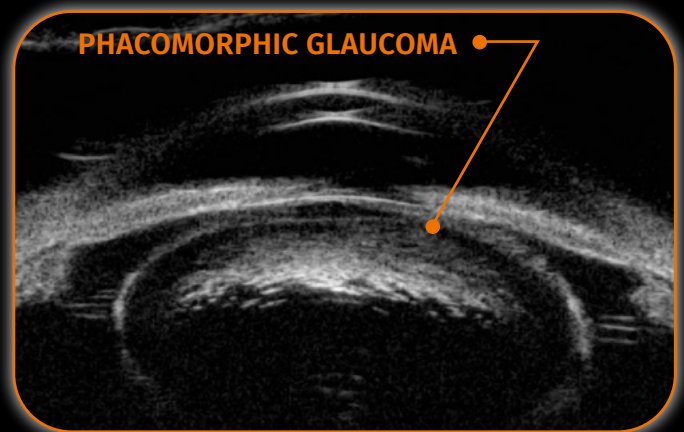
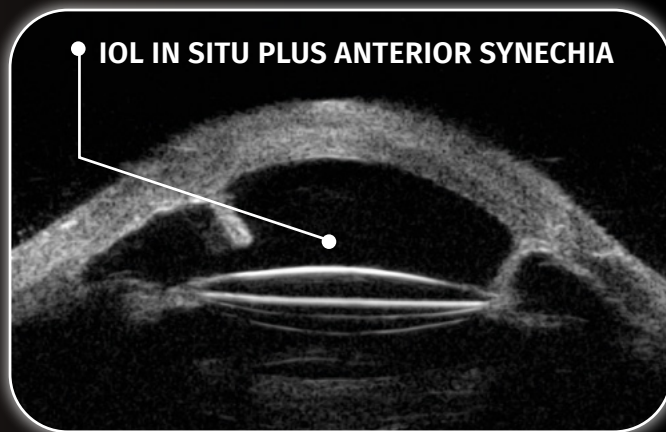
■ OPTIMIZED UBM IMAGING

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.

■ 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.



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

■ STS MODULE*

For anterior chamber IOLs, the **STS option*** enables visualization of the entire anterior chamber in a single scan. The anatomy of the anterior chamber can be assessed efficiently, and Sulcus-to-Sulcus measurements are performed quickly and accurately. On ABSolu®, this option is also being considered for Sulcus-to-Sulcus measurements prior to Implantable Collamer Lens (ICL) surgery. Combined with the **GURU Export option***, it contributes to optimized and secure ICL sizing. The optional STS module provides automatic measurement of Sulcus-to-Sulcus distance, Lens Curvature, and Anterior Chamber Depth, ensuring precision and reliability in your preoperative assessment.

 **ICLguru®**
AI POWERED SIZING

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.

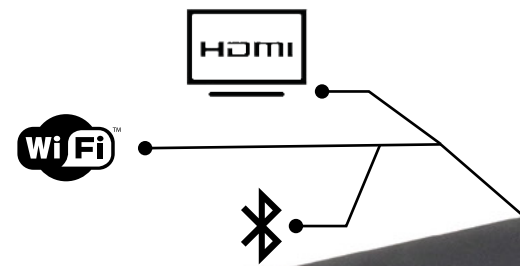
This helps the operator to easily and quickly identify the area of examination.

THIS TECHNOLOGY IS PATENTED AND EXCLUSIVE.

■ 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.



■ 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.

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 up to 400 images
Cineloop in B mode:	

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* / GURU Export*	

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)

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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 11 LTSC Operating System
HDD 2TB - 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:	11.5 kg (25.35 lbs) (w/o probes)

Quantel Medical, by Lumibird Medical, is only ICLguru compatible, and the goal is only to send files to REVAI platform for ICL calculation. The images sent to REVAI platform have to be checked and validated by the user before sending. Quantel Medical, by Lumibird Medical, cannot decide of the correct images sent to REVAI platform for ICL calculation. Quantel Medical, by Lumibird Medical, cannot be held responsible in case of ICL miscalculation.

Manufacturer

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