ABSolu®

IMAGING
EXCELLENCE

Quantel medical
BY LUMIBIRD MEDICAL

A/B/S/UBM Ultrasound Platform

ABSolu®

Quantel Medical

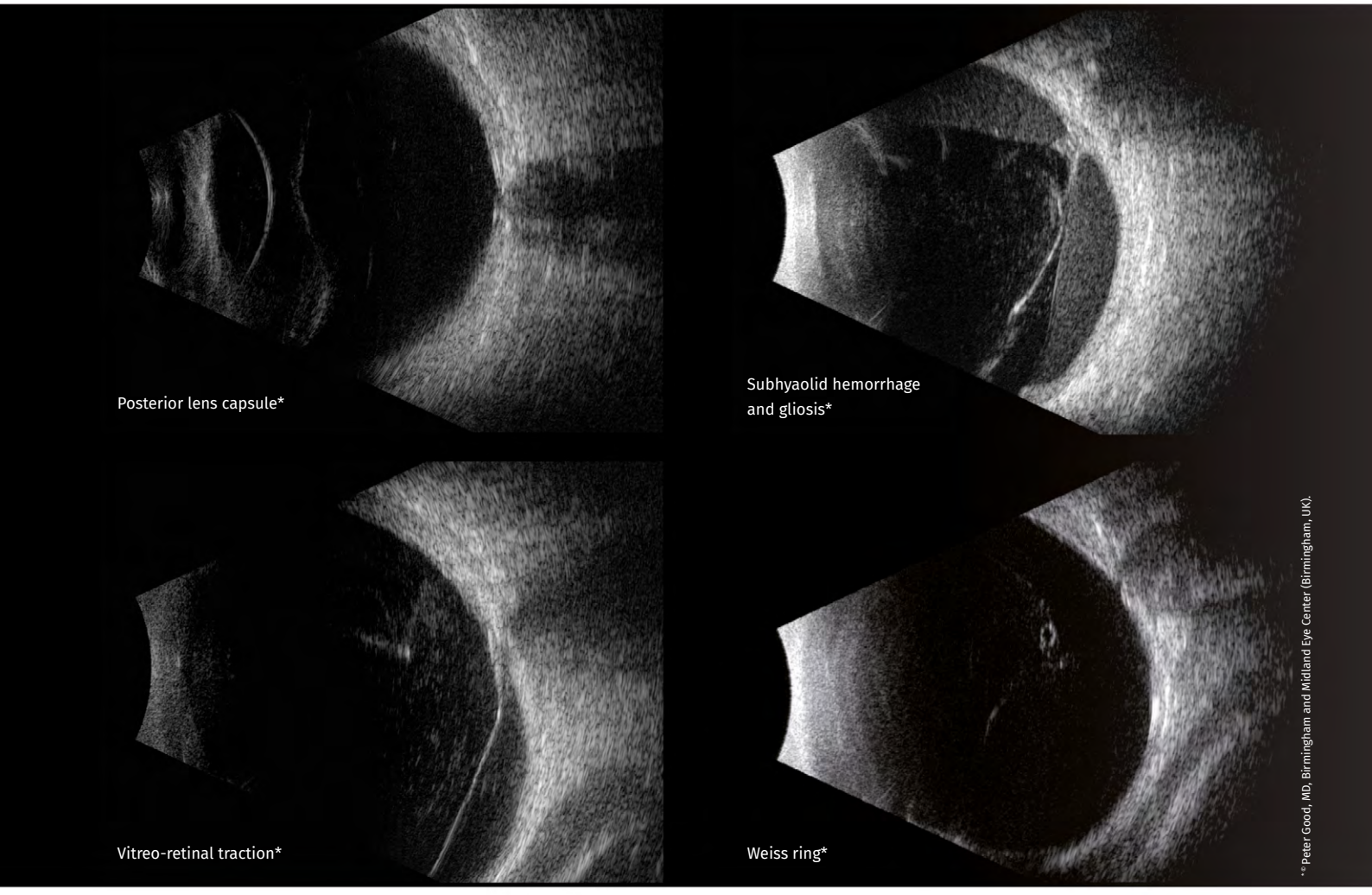
NEW ANNULAR IMAGING

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.

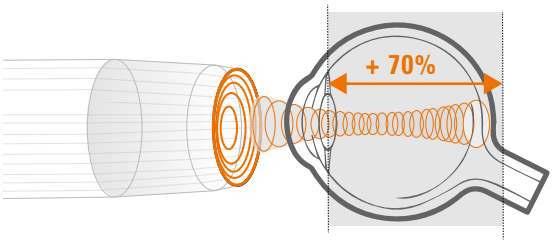
This technology:
- increases **the focus area**,
- reduces the lateral resolution from 250 to 200 µm i.e. 25%
- **maintains high axial resolution**.

The images thus obtained are spectacular as the **entire eye is now visible** with an exceptional level of **detail**.



A SINGLE MULTIFUNCTION PROBE

The annular technology almost **doubles the depth of field : the new 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.



the world leader in ophthalmic ultrasound

REDESIGNED USER INTERFACE

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

- **Wide range** of measuring tools.
- **Display in dual mode** for easy comparisons of examinations.
- Fully configurable patient **report generator**.

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

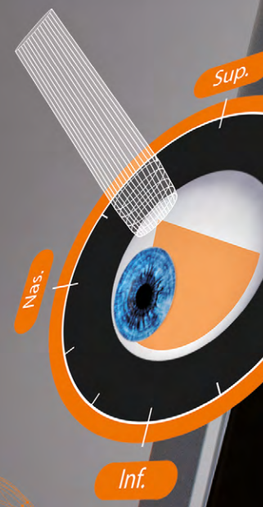
INTEGRATED **MOTION SENSOR** IMUv®

The B15, B20 and UBM probes are equipped with a position sensor **IMUv** that provides **real-time essential informations** such as:

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

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

THIS **TECHNOLOGY** IS **PATENTED**
AND **EXCLUSIVE** TO **QUANTEL MEDICAL**.



DICOM IMAGING

1080p FULLHD

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

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

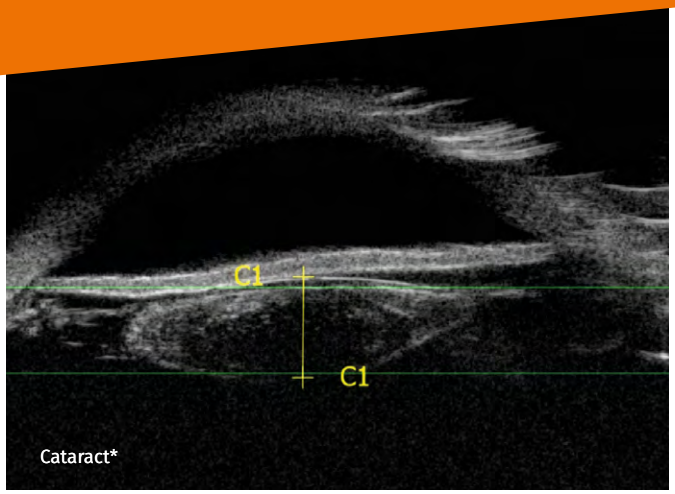
ABSwitch™ **8 FUNCTION** WIRELESS FOOTSWITCH

- Adjustable Gain (+ and –).
- Freeze/unfreeze image.
- Viewing of Cineloop images (forward and reverse function).
- Images saved in the patient's file.
- Tag on the Cineloop.

NEW UBM IMAGING

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

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

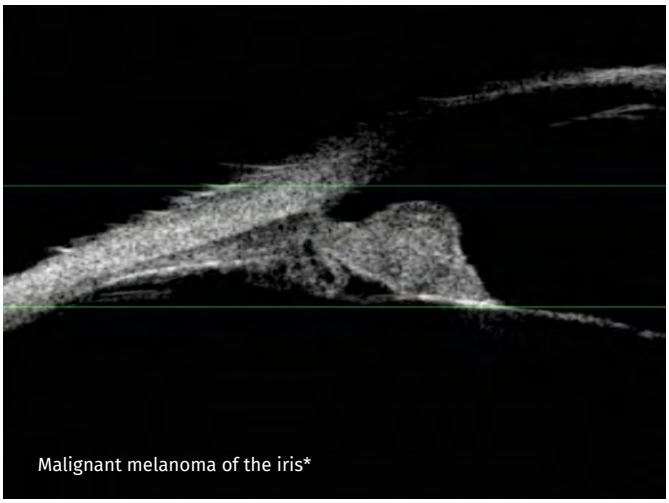


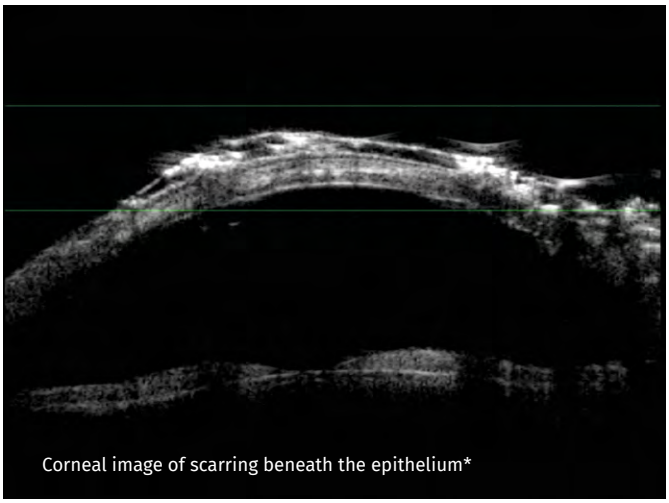
Cataract*

GLAUCOMA MODULE

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

Tumor of the tear gland*


Malignant melanoma of the iris*


Corneal image of scarring beneath the epithelium*

* © Peter Good, MD, Birmingham and Midland Eye Center (Birmingham, UK).

STANDARDISED **ULTRASOUND**

With **numerous enhancements** that make it **easier and more intuitive to use**, ABSolu remains the only ultrasound platform that meets **Professor Karl Ossoinig's criteria**.

The **S mode allows for**:

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

A-SCAN BIOMETRY AND **B MODE BIOMETRY**

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

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

This measurement is **facilitated by the ProBeam™ probe** (biometric probe with on-board laser) which makes for better cooperation from the patient during examination.

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

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

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

STANDARDIZED A MODE

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

Diagnosis functions featuring:	Lesion Q1, Retina A1, Retina Q2, muscular 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.

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"/2.36") 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 **in options*

GENERAL INFORMATION

Connection 5 USB ports (1 on the base – 4 on the bottom of the screen)
HDMI and Ethernet outlets
Windows 10 embedded exploitation system
HDD 1TB - SSD128 Gb – RAM 16 Gb
No restriction of storage in patient file

Electrical requirements

Power supply:	80-264 Vac
Frequency:	47/63 Hz
Power:	60 VA max

Features

Overall dimensions:	Height 445 mm (17.51") - 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" inch HD (1920*1080p)
Weight:	10.6 kg (23.37 lbs) (w/o probes)

Specifications are subject to change without notice.

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