SONOSCANNER
Premium Diagnostic Ultrasound

ONDINA

EXTENDED

TECHNICAL DATA SHEET

Sonoscanner
6 rue André Voguet, 94200 Ivry Sur Seine. FRANCE.
www.sonoscanner.com. contact@sonoscanner.com

ONDINA EXTENDED TECHNICAL DATA SHEET

Featuring the next generation of portable ultrasound system, the ONDINA combines premium performance and versatility in a highly portable and easy to use platform. The ONDINA is designed for the following clinical applications: Vascular, Obstetrics, Gynecology, Small Parts and Superficial, Abdominal, Urological, Musculoskeletal, Breast, and Pediatric.

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Dimensions ➢ Depth: 37cm ➢ Width: 29cm ➢ Height: 7cm	**Weight** ➢ **4.6KG APPROX WITH BATTERY**
Console ➢ Laptop Style ➢ **Operating System: Windows 10** ➢ **Boot Up Time: 20 sec** ➢ 1 probe port: Automatic probe selection ➢ Storage capacity: 250Go ➢ Front Handle ➢ **2 USB 3.0 Ports** ➢ **HDMI Output**	**Screen** ➢ **15 INCH HIGH RESOLUTION LCD COLOR MONITOR** ➢ Screen Resolution: 1024 X 768 ➢ Angle Adjustment: 0° to 100° ➢ Integrated Stereo Speaker ➢ Magnetic closure
Control Panel ➢ Alphanumeric Keyboard ➢ Hard Key Operations ➢ 11 multifunction soft buttons dedicated to Scanning Modes ➢ 4 multifunction digital encoders ➢ Trackball: 25mm	**Electrical Power** ➢ Voltage: 110V or 220V ➢ Frequency: 50/60Hz

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Applications:

- Vascular
- Abdominal
- Obstetrics
- Gynecology
- Anesthesia
- Urology
- Small Parts and Superficial
- **Ti-rads**
- **Bi-rads**
- Pediatric

Scan Frequency range:

- **From 1.5 to 20 Mhz**

Probe elements range:

- **From 128 to 192 elements**

Main* Probes

- HD Linear Array
  Applications: Vascular, Small Parts, Breast, Musculoskeletal, Pediatric, Neonatal
  Band Width: 10MHz ~ 18MHz
  Steered Angle: +/- 10°
  Trapezoidal Imaging

- Linear Array
  Applications: Vascular, Small Parts, Breast, Musculoskeletal, Pediatric, Neonatal
  Band Width: 05MHz ~ 12.5MHz
  Steered Angle: +/- 10°
  Trapezoidal Imaging

- Convex Array
  Applications: Abdominal, OB/GYN, Urology, Vascular
  Band Width: 02MHz ~ 05MHz
  Scanning angle: 60°

- Endocavitary Array
  Applications: OB/GYN, Urology
  Band Width: 04MHz ~ 09MHz
  Scanning angle: 148°

- Phased Array
  Applications: Cardiology, Abdominal
  Band Width: 02MHz ~ 04MHz
  Scanning angle: 90°

- Motorized Convex 3D/4D (Mechanical)
  Applications: OB, Urology, Abdominal, Renal
  Band Width: 03MHz ~ 06MHz
  Scanning angle: 77°

Imaging Modes

- B-Mode
- M-Mode
- Color Doppler (CFM)
- Power Doppler
- **Directional Power Doppler**
- Pulse Wave Doppler (PW)
- **Continuous Wave Doppler (CW)**

Combination Modes

- B/B Mode
- B/M Mode
- Dual M-Mode
- Duplex Mode
- **Triplex Mode**

(optional) ➢ Tissue Harmonic Imaging ➢ **Panoramic (optional)** ➢ **4D Real Time (optional)** ➢ **Elastography (optional)**	
Storage Capacity ➢ Integrated HDD: 250Go (Images, Cine Loop etc.) ➢ CINE Memory: Sequence of up to 40 seconds each (25 images per second). ➢ Archive format: JPEG	**Media & Peripheral devices:** ➢ Digital B/W printer (Thermal printing): Optional ➢ Digital color printer (Dye sublimation thermal transfer): Optional
Software Options: ➢ **4D** ➢ **PANORAMIC** ➢ **ELASTOGRAPHY** ➢ **DICOM 3.0**	**Hardware Options:** ➢ Travelling Case ➢ Dedicated Cart ➢ Sontrio for three probes connexion
Connectivity: ➢ Ethernet Network Connection: Gigabit LAN.	**Exclusivity:** ➢ Probe Holder integrated and removable

SCANNING PARAMETERS ON REAL TIME EXAM

B Mode (2D),Harmonic and M Mode :

- Acoustic Power Output
- Probe Frequency
- 2D Gain
- Time Gain Compensation
- Dynamic Range
- Edge Enhancement
- Focus Number
- Focus Position
- Depth. Minimum Depth : 2cm (probe dependent). Maximum Depth : 30cm (probe dependent)
- Real Time Adapting Smoothing®: for image smoothing, speckle reduction and contour enhancement
- Time Smooth
- Continuous Zoom and Scroll
- Trapezoid Mode. With linear probe only
- Harmonic Mode. With convex probe only
- Compound Imaging: iSteer®
- Line Density

CFM,Power and Directionnal Modes:

- Acoustic Power Output
- CFM Window Size
- CFM Window Location
- Color Gain
- Pulse Repetition Frequency
- Steering : With linear probe only
- Trapezoid Mode. With linear probe only
- Color Inversion
- Color Frequency
- Focus Position
- Wall Filter
- Duplex
- Triplex
- Continuous Zoom and Scroll
- Color Map

Pulse Wave Mode

- Acoustic Power Output
- PW Gate position
- PW Gate Length
- PW Frequency
- PW Baseline Adjustment
- PW steering (possibility to combine color and PW steering in triplex mode): With linear probe only
- PW Inversion
- PW Gain Adjustment
- Wall Filter
- Pulse Repetition Frequency
- Duplex
- Triplex
- Audio Adjustment
- Angle Correction
- Automatic PW Doppler Optimization: Autoset®
- Line
- Auto Trace

3D/4D Acquisition

- 3D Rendering
- Real Time 4D Mode
- 4D Depth Adjustment : Scan distance
- Sectional Plane
- 360° display rotation
- Continuous Zoom

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SCANNING PARAMETERS ON POST PROCESS

B Mode (2D) and M Mode :

- **2D GAIN**
- Time Gain Compensation
- **DYNAMIC RANGE**
- Edge Enhancement
- Real Time Adapting Smoothing® for image smoothing, speckle reduction and contour enhancement
- Time Smooth
- Continuous Zoom and Scroll

CFM,Power and Directionnal Modes:

- **COLOR GAIN**
- Color inversion
- Wall Filter
- Continuous Zoom and Scroll

Pulse Wave Mode

- **PW BASELINE**
- PW Inversion
- **PW GAIN ADJUSTMENT**
- Audio Adjustment
- Wall Filter
- Automatic PW Optimization: Autoset®

3D/4D Acquisition

- 3D Rendering
- Real Time 4D Mode
- Treshold (Opacification)
- Continuous Zoom
- 360° display rotation

IMAGE PROCESSING AND PRESENTATION

- **Full digital beamformer**
- Number of processing channels : 1,024
- Displayed Image Depth : 2 – 30cm. Probe dependent
- Receiving focus: Dynamic continuous focusing
- Dynamic range: 150dB
- Gray scale 256 shades of gray
- Multi frequency/Wideband probes
- MI-TI Display

Cine Memory/Image Memory:

- Cine Review: Loop or frame by frame
- Cine Memory: Sequences of up to 40 seconds each

Certifications:	**Safety Standards:**
➢ The medical device described above is CE marked according to EC directive 93/42, Annex 2, Article 3. ➢ EN-ISO 13485:2016: Sonoscanner manufacturer of the medical device described above complies with the requirements for the implementation of a quality management system for medical devices	The products described above complies with the following safety standards: ➢ EN-ISO 60601-1: General requirements for basic safety and essential performance ➢ EN-ISO 60601-1-1: Electrical Medical Equipment ➢ EN-ISO 60601-1-2: Electromagnetic Compatibility ➢ EN-ISO 60601-1-4: Programmable Medical Systems ➢ EN-ISO 60601-2-37: Particular requirements for the basic safety and essential performance of medical ultrasound system and monitoring equipment

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