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<b>Title</b>	<b>P40 Elite Series Technical Specifications</b>
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**SonoScape**



## **Specifications for P40 Elite Series Digital Color Doppler Ultrasound System**

901-08212-A09

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# 1 General Specifications

## 1.1 Applications

- Abdomen
- Cardiology
- OB/Gynecology
- Musculoskeletal
- Vascular
- Small parts
- Urology
- Pediatrics
- TCD
- Breast
- Intraoperative

## 1.2 Probe Types

- Convex array probe
- Linear array probe
- Phased array probe
- Volume probe
- Pencil probe
- Biplane probe

## 1.3 Imaging Modes

- B
- THI/PHI/SPHI
- M
- Anatomical M
- Color M
- CFM
- PDI/DPDI
- PW
- CW
- TDI
- TDI+PW
- TDI+M

## 1.4 Features

- 5-band adjustable frequency in B mode (fundamental wave and harmonic wave)
- $\mu$ -Scan
- HQ Scan
- Compound Imaging
- LGC (8-band)

- Tissue Specific Index
- Image Rotation
- Trapezoid Imaging
- SR Flow (High Resolution Flow)
- HPRF (High Pulse Repetition Frequency)
- Micro F (Slow Flow Imaging of Microvascularized Structures)
- Bright Flow (Three-dimensional Visualization of Blood Flow)
- Simultaneous Mode (Triplex)
- PW Auto Trace
- Auto IMT
- Auto NT
- Auto EF
- Auto Bladder
- S-Follicle
- S-Endo
- Auto OB plus
- S-MSK
- Scr-Zoom
- HD-Zoom
- B Mode Panoramic Imaging
- Color Panoramic Imaging
- Biopsy Guide
- Vis-Needle
- Freehand 3D
- C-xlasto
- ECG
- TDI (Tissue Doppler Imaging with Quantitative Analysis)
- Sono Assistant
- Sono-Drop
- Show Gallery
- Sono-Help
- S-Fetus
- S-PF
- 3D/4D Module
- S-Live & S-Live Silhouette
- S-Live Contour
- S-Depth
- Color 3D
- STIC
- Auto Face
- S-Spine
- VCI

- FreeVue
- AVC Follicle
- Vocal
- Contrast Imaging with TIC Analysis
- MFI
- MFI Time
- Mix Mode in Contrast Imaging
- Stress Echo
- G-MQA
- R-MQA
- S-Hip
- Remote Upgrade

## 1.5 Languages

- Software: English, Simplified Chinese, Spanish, Russian, French, Italian, German, Norwegian, Portuguese, Japanese, Dutch, Polish and Czech
- Keyboard: English, Simplified Chinese, Latin, French and Polish
- User manual: English and Simplified Chinese

## 2 Physical Specifications

### 2.1 Dimension and Weight

- Width: approx. 550 mm
- Depth: approx. 740 mm
- Height:
  - approx. 1085 mm to 1680 mm with 21.5-inch monitor
  - approx. 1085 mm to 1740 mm with 23.8-inch monitor
 (The lowest height is measured when the control panel, the upper swivel arm and the monitor are adjusted to the lowest position; The Highest height is measured when the control panel, the upper swivel arm and the monitor are adjusted to the highest position)
- Weight: approx. 83.7 Kg

### 2.2 Monitor

- Monitor:
  - 21.5-inch medical high resolution monitor
  - 23.8-inch medical high resolution

- monitor (Optional)
- Resolution: 1920×1080
- Viewing angle: 178°(horizontal), 178°(vertical)
- Swivel angle: ±40°
- Up/down angle:
  - 90° to 25° (21.5-inch monitor)
  - 90° to 45° (23.8-inch monitor)
- Contrast and brightness: 0 - 100 adjustable
- Monitor Arm
  - Upper swivel arm can be rotated left and right, relative to lower swivel arm. Swivel angle: ±110°
  - Upper swivel arm can be adjusted up and down, relative to lower swivel arm. Swivel angle: 0° to 40°
  - Lower swivel arm can be rotated left and right, relative to main body. Swivel angle: ±50°

### 2.3 Touch Screen

- 13.3-inch medical high resolution monitor
- Resolution ratio: 1920×1080
- Viewing angle: 170° (horizontal), 170° (vertical)
- Adjustable inclination angle range: 0° to 15°
- Brightness and contrast: adjustable
- Available to touch with latex gloves
- User-defined parameter preset layout
- Anti-glare and anti-fingerprints

### 2.4 Control Panel

- User-oriented design
- Backlight design
- Multiple user-defined keys
- TGC: 8 levels slider controls
- Trackball sensitivity: adjustable
- Swivel angle (left/right): -40° to 40° (from center)
- Adjustable height range: 0 to 230 mm
- Full-sized backlit keyboard on the panel

### 2.5 Speaker

Hi-Fi Speaker

## 2.6 Caster

- Diameter: 5 inches
- Specification: all the 4 casters can be independently locked

## 2.7 Probe Port and Probe Holder

- Probe ports: 5
- Pencil probe port: 1
- Endocavity probe holder: 1
- Probe holder: 7
- Gel holder: 1
- Gel warmer: 1
- Cable hanger: 2
- Cable holder: 2

## 2.8 Power

- 100-127V/220-240V~
- Frequency: 50/60HZ
- Maximum power output: 500VA
- Built-in battery (charging time  $\leq$  9h; power supply time  $>$  1.5h)
- System boot up time: approx.  $\leq$  85 s
- System shut down time: approx.  $\leq$  32 s
- Entry time for standby:  $\leq$  10s
- Exit time for standby:  $\leq$  38s
- SSD (Solid state drive)

## 2.9 Working Environment

- Temperature: 0°C to 40°C (10°C to 40°C when used with 4D probe)
- Relative humidity: 30% - 85%RH (no condensation)
- Atmospheric pressure: 700hPa - 1060hPa
- System noise:  $\leq$  55dB

## 2.10 Storage and Transportation Environment

- Temperature: -20°C to +55°C
- Relative humidity: 20% - 90% (no condensation)
- Atmospheric pressure: 700hPa - 1060hPa

## 3 Annotation and Body Mark

- All exam applications included
- Annotation: text annotation and arrow

annotation

- Manual text annotation by touch screen
- Front size of text annotation: adjustable
- Initial position: user-defined
- Preset text annotation
- Arrow direction: adjustable
- Body marks:  $\geq$  142, selectable
- Body marks classified by specific exam types, and position adjustable
- Preset customization

## 4 Monitor Information

- Manufacturer logo
- Hospital name
- System date and time
- Probe and exam item
- MI and TI
- Operator
- Probe icon
- Patient ID, name, date of birth, gender and age
- Exam type icon
- Tissue temperature display (specified probe)
- Depth scale and focus position
- Image parameters
- Thumbnail image
- Clipboard
- Screen saver

## 5 Image Parameter

### 5.1 Overview

- Grayscale: 256 levels
- Transducer element: up to 256
- Audio: 0 - 100 levels adjustable

### 5.2 B Mode

- Gain: 0 - 255 adjustable
- Scan depth:  $\geq$  40cm (different adjustable depth ranges for different probes)
- Compound imaging: off, 1, 2, 3 adjustable (e.g. 3C-A)
- HQ Scan: off, 1, 2, 3, 4 adjustable
- Frequency: 5 bands adjustable (fundamental wave: 5 bands; harmonic wave: 5 bands)

- Chroma: 1-13, 13 types selectable
- Adapt fusion imaging: 0-15, 16 types selectable
- $\mu$ -Scan: off, 1-8, 9 levels adjustable (e.g. 3C-A, different levels for different probes)
- Line density: 4 levels adjustable (Low/Med/High/SuperHigh)
- Persist: 0 - 60 (e.g. 6V3)
- Focus number: 16 (e.g. C1-6A, different focus number for different probes)
- Focus span: adjustable
- Dynamic range: 20 - 300 (e.g. C1-6A)
- Gray map: 1 - 15, 15 types selectable
- Power%: 1 - 100, 100 levels adjustable
- NSI: 0-254, 255 levels selectable
- Tissue acoustic index: 1400 - 1700, 31 levels adjustable
- TGC: 8 levels slider controls
- LGC: 8 bands
- Image inversion: left/right, up/down, rotation
- Sector width: adjustable
- B steer: 3 levels adjustable (linear array probe)
- Widescan: off, 1, 2
- Auto optimization: Gain and GSC
- Maximum frame rate: 2000f/s (e.g. S1-5, Cardiac-P)

### 5.3 M Mode

- Gain: 0 - 255 adjustable
- Chroma: 1 - 5, 5 types selectable
- Display format: H1/2, H1/4, V1/3, V1/2, V2/3, O1/4
- Scan speed: Min, Slow, Med, Fast, Max, 5 levels adjustable (e.g. Cardiac probe)
- Video invert: On/Off
- M process: Switch between average and peak values
- Power%: 30 - 100, 8 levels adjustable
- Color M: CFM, TDI

### 5.4 Anatomical M Mode

- Display 3 sample lines simultaneously
- Angle and position of sample lines: adjustable

### 5.5 CFM Mode

- Gain: 0 - 255 adjustable
- Power%: 0 - 100, 11 levels adjustable
- B reject: 0 - 255, 256 levels adjustable
- Size and position of color ROI: adjustable
- Image inversion: up/down, left/right
- Bright flow: Off, 1, 2, 3
- Invert: On/Off
- Frequency: 5 bands adjustable
- Wall filter: 10 - 750 adjustable (e.g. 12L-A)
- PRF: 0.5 - 8kHz adjustable (e.g. 3C-A)
- Line density: Low, Med, High, Highest, 4 levels adjustable
- Color map: 1-10, 10 types selectable
- Baseline:  $\pm 15$ , 31 levels adjustable
- Persist: 0 - 80 (e.g. 3C-A)
- ROI steer: 5 levels adjustable (linear array probes)
- ROI color: adjustable
- Auto optimization: ROI position and steer angle
- Dual live
- Maximum frame rate: 260f/s (S1-5, Cardiac)

### 5.6 PDI/DPDI Mode

- Power%: 0 - 100, 11 levels adjustable
- B reject: 0 - 255, 256 levels adjustable
- Persist: 0 - 80, 5 levels adjustable (e.g. 3C-A)
- Color map: 1 - 11, 11 types selectable
- Image inversion: up/down, left/right
- Bright flow: Off, 1, 2, 3
- Wall filter: 10 - 750 adjustable (e.g. 3C-A)

### 5.7 PW Mode

- Gain: 0 - 255 adjustable
- Display format: H1/2, H1/4, V1/3, V1/2, V2/3, O1/4
- Simultaneous mode (Triplex)
- PW sample volume: 0.5 - 30mm (e.g. 3C-A)
- PW sample position: adjustable
- Invert: On/Off
- Quick angle correction: 0°, 60° adjustable

- Angle correction range: 0 - 72° adjustable
- Steer angle: 5 levels adjustable (linear array probe)
- Auto trace: achievable in real-time mode and frozen mode
- Baseline: 17 levels adjustable
- Frequency: 5 levels adjustable
- Wall filter: 25 - 800 adjustable (e.g. 3C-A)
- PRF: 0.5 - 25kHz (e.g. C1-6)
- HPRF
- Velocity range: 0-27m/s (e.g. C1-6, PRF=25 kHz,  $\theta=72^\circ$ , frequency=2.2 MHz, the lowest baseline)
- Scan speed: Min, Slow, Med, Fast, Max
- Chroma: 1 - 5, 5 types adjustable
- Dynamic range: 11 - 20, 10 levels adjustable (e.g. C1-6)
- Auto Optimization: Baseline and PRF

## 5.8 SR Flow

- Gain: 0 - 255 adjustable
- Power%: 0 - 100, 11 levels adjustable
- B reject: 0 - 255, 256 levels adjustable
- Size and position of color ROI: adjustable
- Image inversion: up/down, left/right
- Bright flow: Off, 1, 2, 3
- Frequency: 5 bands adjustable
- PRF: 0.5-8kHz adjustable (e.g. 3C-A)
- Line density: 4 levels adjustable (Low/Med/High/Superhigh)
- Color map: 1-4, 4 types selectable
- Persist: 0 - 80 (e.g. C1-6)
- ROI steer: 5 levels adjustable (linear array probes)
- ROI color: adjustable
- Auto optimization: ROI position and steer angle
- Dual live
- Wall filter: 15-750
- Maximum frame rate: 255f/s

## 5.9 CW Mode

- Gain: 0 - 255 adjustable
- Display format: H1/2, H1/4, V1/3, V1/2, V2/3, O1/4

- CW sample position: adjustable
- Invert: On/Off
- Angle correction range: 0 - 72°
- Auto trace: achievable in real-time mode and frozen mode
- Baseline: 17 levels adjustable
- Wall filter: 25 - 800 levels adjustable
- PRF: 1 - 48kHz (e.g. S1-5)
- Velocity range: 0 - 40m/s (S1-5, PRF=48kHz,  $\theta=60^\circ$ , frequency=1.8 MHz, the lowest baseline)
- Scan speed: Min, Slow, Med, Fast, Max
- Chroma: 1 - 5, 5 types adjustable
- Dynamic range: 21-34, 14 levels adjustable

## 5.10 TDI Mode

- Tissue speed imaging and tissue power imaging
- Power%: 0 - 100, 11 levels adjustable
- B reject: 0 - 255, 256 levels adjustable
- Persist: 0 - 50, 5 levels adjustable (e.g. S1-5)
- Color map: 1 - 14 adjustable
- Image inversion: up, down, left, right
- Invert: On/Off
- Wall filter: 25 - 800 adjustable (e.g. S1-5)

## 5.11 TDI+PW Mode

- PRF: 0.5 - 25.0 kHz (e.g. S1-5)
- Velocity range: 0 - 17m/s (S1-5, PRF=25kHz,  $\theta=72^\circ$ , SVD=0 cm, the lowest baseline)

## 5.12 TDI+M Mode

- Gain: 0 - 255 adjustable
- Chroma: 1 - 5, 5 types selectable
- Display format: H1/2, H1/4, V1/3, V1/2, V2/3, O1/4
- Scan speed: Min, Slow, Med
- M process: switch between average and peak values
- Power%: 30 - 100, 8 levels adjustable

# 6 Advanced Features

## 6.1 Micro F

- Dual live
- Hide flow
- Image inversion: up/down, left/right
- Smooth: Off, 1, 2, 3, 4
- Bright flow: Off, 1, 2, 3
- Biopsy and biopsy calibration: available

## 6.2 Widescan Imaging

- Widescan: off, 1, 2 (linear array probe and convex array probe)

## 6.3 Zoom

- Zoom ratio: 0.7 - 10.0
- Scr-Zoom (one key full screen zoom)
- Pan-Zoom
- HD zoom

## 6.4 Customized Preset

- Customizable preset: user-defined parameters for different probes and exam types
- Preset order: adjustable
- Import or export presets
- Delete presets
- Overwrite presets

## 6.5 Freehand 3D

- Scan method: sector scan, parallel scan
- Display format: single display, dual-split display, quad-split display
- Slice: A, B, C, 3D
- Rotate image along X, Y or Z axis
- Up/Down: move the image up/down
- Left/Right: move the image left/right
- Direction: top, bottom, left, right, front, back
- 3D orientation: 0°, 90°, 180°, 270°
- Reset: default settings, sweep angle, viewing angle, direction
- Render mode: Surface, Grad. Light, Skeleton, Transp. Min, X-Ray, S-Depth, S-Live
- Auto rotation: 0°, 45°, 90°, 180°, 270°, 360°
- 3D Frame: On/Off
- Edit ROI: On/Off

- Adjust light: On/Off (S-Live)
- Trackball (Rotate highlighted): Rotate, Z Rotate
- Threshold: 0 - 100, 1 each step
- Contrast: 0 - 100, 1 each step
- Transparency: 0 - 100, 1 each step
- Brightness: 0 - 100, 1 each step
- Smoothness: 0 - 30, 1 each step
- Light position: 0 - 9, 1 each step
- B Chroma: 1 - 13, 1 each step
- 3D Chroma: Off, 1- 14 adjustable, 1 each step
- Distance in parallel scan mode: 10 -200, 10 each step (range depends on number of scanning slices)
- Z axis angle in sector scan mode: 5°- 170°, 5° each step
- Edit: trace, box, eraser
- Display (C-Plane): AB, AC, BC, ABC
- M-Slice
  - Display: 1\*2, 2\*2, 3\*4, 3\*3, 4\*4, 5\*5
  - Slice distance: 0.5 - 10.0 adjustable, 0.5 each step
  - Slice number: 3 - 29 adjustable, 2 each step
  - Single slice magnification
- AVC Follicle

## 6.6 Static 3D/4D

- Display format: single display, dual-split display, quad-split display
- Slice: A, B, C, 3D
- Rotate image along X, Y or Z axis
- Up/Down: move the image up/down
- Left/Right: move the image left/right
- Direction: top, bottom, left, right, front, back
- 3D orientation: 0°, 90°, 180°, 270°
- Reset: default settings, sweep angle, viewing angle, direction
- Render mode: Surface, Grad. Light, Skeleton, Transp. Min, X-Ray, S-Depth, S-Live
- Auto rotation: 0°, 45°, 90°, 180°, 270°, 360°
- 3D Frame: On/Off

- Image quality: Low, Med1, Med2, High1, High2, Max
- Sweep angle: 10°-120° (VE9-5) / 5°-75° (VC6-2) / 5°-85° (VC2-9), 5° each step
- Stability: On/Off
- Focus: can be moved and adjusted according to ROI
- Edit ROI: On/Off
- Auto face: On/Off
- Adjust light: On/Off (S-Live)
- VolPre: user can return to pre-activated mode from activated mode
- Cine loop: different adjustment range for different size of volume data
- First frame: To first frame
- Last frame: To last frame
- Auto play: On/Off
- Set first frame: set the saved first frame
- Set last frame: set the saved last frame
- Frame by frame: select the current frame
- Cine speed: adjust the auto play speed
- Trackball (Rotate highlighted): Rotate, Z Rotate
- Threshold: 0 - 100, 1 each step
- Contrast: 0 - 100, 1 each step
- Transparency: 0 - 100, 1 each step
- Brightness: 0 - 100, 1 each step
- Smoothness: 0 - 30, 1 each step
- Light Position: 0 - 9, 1 each step (light position can also be set at any place by rotating the trackball)
- 3D Chroma: Off, 1- 14 adjustable, 1 each step
- B Chroma: 1 - 13, 1 each step
- 2D  $\mu$ -Scan: Off, 1-19, 20 levels adjustable
- 3D  $\mu$ -Scan: Off, 1, 2, 3, 4, 5, 6 levels adjustable
- Edit: trace, box, eraser
- Display (C-Plane): AB, AC, BC, ABC
- M-Slice
  - Display: 1\*2, 2\*2, 3\*4, 3\*3, 4\*4, 5\*5
  - Slice distance: 0.5 - 10.0 adjustable, 0.5 each step
  - Slice number: 3 - 29 adjustable, 2 each step
  - Single slice magnification
- AVC Follicle
- Maximum frame rate: 36.0 f/s (VE9-5, 4D)

## 6.7 CFM 3D

- Display format: single display, dual-split display, quad-split display
- Slice: A, B, C, 3D
- Rotate image along X, Y or Z axis
- Up/Down: move the image up/down
- Left/Right: move the image left/right
- Direction: top, bottom, left, right, front, back
- 3D orientation: 0°, 90°, 180°, 270°
- Reset: default settings, sweep angle, viewing angle, direction
- Render mode (three types).
  - Color render mode: Surface, X-ray, MIP, Grad. Light
  - Glass render mode: Surface + Surface, Surface + MIP
  - Gray render mode: Surface, Grad. Light
- Auto rotation: 0°, 45°, 90°, 180°, 270°, 360°
- 3D Frame: On/Off
- Image quality: Low, Med1, Med2, High1, High2, Max
- Sweep angle: 10° - 120° (VE9-5) / 5° - 75° (VC6-2) / 5° - 85° (VC2-9), 5° each step
- Edit ROI: On/Off
- Color off: On/Off, available only in Color and Glass render mode
- VolPre: user can return to pre-activated mode from activated mode
- Trackball (Rotate highlighted): Rotate, Z Rotate
- Color threshold: 0 - 127, 1 each step, adjustable only in Color and Glass render mode
- Color map: 1 - 10, 1 each step, adjustable only in Color and Glass render mode
- Gray/Color: 0%/100% - 100%/0%, 1% each step, adjustable only in Glass render mode
- Mix: 0%/100% - 100%/0%, 1% each step
- Threshold: 0 - 100, 1 each step, adjustable only in Glass and Gray render mode

- Contrast: 0 - 100, 1 each step, adjustable only in Glass and Gray render mode
- Transparency: 0 - 100, 1 each step
- Brightness: 0 - 100, 1 each step
- Smoothness: 0 - 30, 1 each step
- 3D Chroma: Off, 1-14 adjustable, 1 each step, adjustable only in Glass and Gray render mode
- B Chroma: 1 - 13, 1 each step
- Edit: trace, box, eraser
- Cut part: Color, Gray + Color, Gray, adjustable only in Glass render mode
- Display (C-Plane): AB, AC, BC, ABC
- M-Slice
  - Display: 1\*2, 2\*2, 3\*4, 3\*3, 4\*4, 5\*5
  - Slice distance: 0.5 - 10.0 adjustable, 0.5 each step
  - Slice number: 3 - 29 adjustable, 2 each step
  - Single slice magnification
- STIC CFM

## 6.8 PDI 3D

- Display format: single display, dual-split display, quad-split display
- Slice: A, B, C, 3D
- Rotate image along X, Y or Z axis
- Up/Down: move the image up/down
- Left/Right: move the image left/right
- Direction: top, bottom, left, right, front, back
- 3D orientation: 0°, 90°, 180°, 270°
- Reset: default settings, sweep angle, viewing angle, direction
- Render mode (three types)
  - Color render mode: Surface, Grad. Light
  - Glass render mode: Surface + Surface, Surface + MIP
  - Gray render mode: Surface, Grad. Light
- Auto rotation: 0°, 45°, 90°, 180°, 270°, 360°
- 3D Frame: On/Off
- Image quality: Low, Med1, Med2, High1, High2, Max
- Sweep angle: 10° - 120° (VE9-5) / 5° - 75° (VC6-2) / 5° - 85° (VC2-9), 5° each step

- Edit ROI: On/Off
- Color off: On/Off, adjustable only in Color and Glass render mode
- VolPre: pre-activate return available
- Trackball (Rotate highlighted): Rotate, Z Rotate
- Color threshold: 0 - 255, 1 each step, adjustable only in Color and Glass render mode
- Color map: 1 - 7, 1 each step, adjustable only in PDI 3D and Glass render mode
- Gray/Color: 0%/100% - 100%/0%, 1% each step, adjustable only in Glass render mode
- Mix: 0%/100% - 100%/0%, 1% each step
- Threshold: 0 - 100, 1 each step, adjustable only in Glass and Gray render mode
- Contrast: 0 - 100, 1 each step, adjustable only in Glass and Gray render mode
- Transparency: 0 - 100, 1 each step
- Brightness: 0 - 100, 1 each step
- Smoothness: 0 - 30, 1 each step
- 3D Chroma: Off, 1 - 14 adjustable, 1 each step, adjustable only in Glass and Gray render mode
- B Chroma: 1 - 13, 1 each step
- Edit: trace, box, eraser
- Cut part: Color, Gray + Color, Gray, adjustable only in Glass render mode
- Display (C-Plane): AB, AC, BC, ABC
- M-Slice
  - Display: 1\*2, 2\*2, 3\*4, 3\*3, 4\*4, 5\*5
  - Slice distance: 0.5 - 10.0 adjustable, 0.5 each step
  - Slice number: 3 - 29 adjustable, 2 each step
  - Single slice magnification
- STIC PDI

## 6.9 SR Flow 3D

- Display format: single display, dual-split display, quad-split display
- Slice: A, B, C, 3D
- Rotate image along X, Y or Z axis
- Up/Down: move the image up/down
- Left/Right: move the image left/right

- Direction: top, bottom, left, right, front, back
- 3D orientation: 0°, 90°, 180°, 270°
- Reset: default settings, sweep angle, viewing angle, direction
- Render mode (three types)
  - Color render mode: Surface, X-ray, MIP, Grad. Light
  - Glass render mode: Surface + Surface, Surface + MIP
  - Gray render mode: Surface, Grad. Light
- Auto rotation: 0°, 45°, 90°, 180°, 270°, 360°
- 3D Frame: On/Off
- Image quality: Low, Med1, Med2, High1, High2, Max
- Sweep angle: 10° - 120° (VE9-5) / 5° - 75° (VC6-2) / 5° - 85° (VC2-9), 5° each step
- Edit ROI: On/Off
- Color off: On/Off, available only in Color and Glass render mode
- VolPre: user can return to pre-activated mode from activated mode
- Trackball (Rotate highlighted): Rotate, Z Rotate
- Color threshold: 0 - 127, 1 each step, adjustable only in Color and Glass render mode
- Color map: 1 - 4 (VE9-5), 1 - 7 (VC2-9, VC6-2), 1 each step, adjustable only in Color and Glass render mode
- Gray/Color: 0%/100% - 100%/0%, 1% each step, adjustable only in Glass render mode
- Mix: 0%/100% - 100%/0%, 1% each step
- B mode threshold: 0 - 100, 1 each step, adjustable only in Glass and Gray render mode
- Contrast: 0 - 100, 1 each step, adjustable only in Glass and Gray render mode
- Transparency: 0 - 100, 1 each step
- Brightness: 0 - 100, 1 each step
- Smoothness: 0 - 30, 1 each step
- 3D Chroma: Off, 1 - 14 adjustable, 1 each step, adjustable only in Glass and Gray render mode
- B Chroma: 1 - 13, 1 each step
- Edit: trace, box, eraser
- Cut part: Color, Gray + Color, Gray, adjustable only in Glass render mode
- Display (C-Plane): AB, AC, BC, ABC
- M-Slice
  - Display: 1\*2, 2\*2, 3\*4, 3\*3, 4\*4, 5\*5
  - Slice distance: 0.5 - 10.0 adjustable, 0.5 each step
  - Slice number: 3 - 29 adjustable, 2 each step
  - Single slice magnification
- STIC SR Flow

## 6.10 STIC

- Display format: single display, dual-split display, quad-split display
- Slice: A, B, C, 3D
- Rotate image along X, Y or Z axis
- Up/Down: move the image up/down
- Left/Right: move the image left/right
- Direction: top, bottom, left, right, front, back
- 3D orientation: 0°, 90°, 180°, 270°
- Reset: default settings, sweep angle, viewing angle, direction
- Render mode: Surface, Grad. Light, Skeleton, Transp. Min, X-Ray, S-Depth, S-Live
- Auto rotation: 0°, 45°, 90°, 180°, 270°, 360°
- 3D Frame: On/Off
- Scan time: 7.5s, 10s, 12.5s, 15s, 2.5s each step
- Sweep angle: 10° - 90° (VE9-5) / 15° - 60° (VC6-2) / 15° - 60° (VC2-9), 5° each step
- Edit ROI: On/Off
- Adjust light: On/Off (S-Live)
- Cine loop: different adjustment range for different size of volume data
- Auto play: On/Off
- Frame by frame: select the current frame
- Cine speed: adjust the auto play speed
- Trackball (Rotate highlighted): Rotate, Z Rotate

- Threshold: 0 - 100, 1 each step
- Contrast: 0 - 100, 1 each step
- Transparency: 0 - 100, 1 each step
- Brightness: 0 - 100, 1 each step
- Smoothness: 0 - 30, 1 each step
- Light position: 0 - 9, 1 each step
- 3D Chroma: Off, 1 -14 adjustable, 1 each step
- B Chroma: 1 - 13, 1 each step
- 2D  $\mu$ -Scan: Off, 1-19, 20 levels adjustable
- 3D  $\mu$ -Scan: Off, 1, 2, 3, 4, 5, 6 levels adjustable
- Edit: trace, box, eraser
- Display (C-Plane): AB, AC, BC, ABC
- M-Slice
  - Display: 1\*2, 2\*2, 3\*4, 3\*3, 4\*4, 5\*5
  - Slice distance: 0.5 - 10.0 adjustable, 0.5 each step
  - Slice number: 3 - 29 adjustable, 2 each step
  - Single slice magnification

## 6.11 FreeVue

- Line type: Line, Curve, Poly Line, Trace
- Line number: One, Two, Three
- View mode: Acture, Project
- Viewing direction: Left, right, top, bottom
- ICON switch: control the display of image marks
- View Rot: control the rotation of icon
- Contrast 3D/4D
- S-Spine

## 6.12 Volume Contrast Imaging

- VCI: On/Off
- Render mode: Surface, X-Ray, Skeleton, Transp.Min, S-Depth
- Thickness: 1mm - 20mm, 1 each step
- Threshold: 0 - 100, 1 each step, adjustable only in Surface and S-Depth render modes
- Contrast: 0 - 100, 1 each step
- Transparency: 0 - 100, 1 each step
- Brightness: 0 - 100, 1 each step
- 2D  $\mu$ -Scan: Off, 1-19, 20 levels adjustable
- 3D Chroma: Off, 1-14, 15 levels

- adjustable, 1 each step
- 3D GSC: 1-15 adjustable, 1 each step
- Reconstruction direction: acquire the VCI volume data from the inside or outside of the line (adjustable only in FreeVue)

## 6.13 Vocal

- Contour tracing
- Segmentation method: Manual, Sphere
- Rotation step: 6°, 9°, 15°, 30°
- Volume Measurement: available, inside, outside, shell, reference
- Contour editing: available
- Shell mode: off, inside, outside, symm.
- Contour render: available
- Contour render: skin or wire mesh
- Contour light: adjustable
- Contour color: 1 – 5 level, 1 each step
- Thresh vol: Low, High, Threshold volume
- Threshold: 0 – 100, 1 each step
- Shell volume render: available
- Histogram display: MG, VI, FI, VFI

## 6.14 3D/4D HyCoSy

- Edit ROI: On/Off
- Reset: default settings, sweep angle, viewing angle, direction
- Rotate: On/Off
- Invert: On/Off
- VolPre: user can return to pre-activated 3D/4D mode from activated mode
- Auto optimization: time cut (related to acquisition time); optimization coefficient: 0.0 - 1.0, 0.1 each step
- SPI: SPI cut (related to acquisition time); optimization coefficient: 0.0 - 1.0, 0.1 each step
- Display format: single display, dual-split display, quad-split display
- Slice: A, B, C, 3D
- Rotate image along X, Y or Z axis
- Up/Down: move the image up/down
- Left/Right: move the image left/right
- 3D orientation: 0°, 90°, 180°, 270°
- Render mode: Surface, Grad. Light, Skeleton, Transp. Min, X-Ray, S-Depth,

- S-Live
- Multiple lights adjustment in render mode: Lights in S-Live Studio mode are adjustable
- 3D Frame: On/Off
- Auto rotation: 0°, 45°, 90°, 180°, 270°, 360°
- Direction: top, bottom, left, right, front, back
- Cut and edit: available

## 6.15 Panoramic Imaging

- B mode panoramic imaging
- Color panoramic imaging (CFM/PDI), only available on linear array probe
- Rotation: -180° to 180°
- Zoom: 8.0 times
- Maximum available length: 1000mm
- Chroma: 1-13
- Gray map: 1 - 15
- Image scale: On/Off
- Full view

## 6.16 Biopsy Guide Function

- Biopsy line angle: adjustable
- Biopsy line dot size: adjustable
- Biopsy depth: adjustable
- Biopsy line angle calibration
- Biopsy line offset calibration
- Biopsy line calibration parameter storage and load default
- User-defined biopsy line angle

## 6.17 Vis-Needle

- Steer angle:
  - Left: 20° to 50°, 5° each step, 7 levels adjustable
  - Right: -20° to -50°, 5° each step, 7 levels adjustable
- Direction: left and right, 2 levels adjustable
- Dual-split display

## 6.18 C-xlasto (Compression Elastography)

- Image inversion: up/down, left/right
- Display format: single display and dual-split display
- Map display: independent adjustment of left and right map
- Depth adjustment
- B image parameters: adjustable
- TGC: adjustable
- User-defined preset of C-xlasto: available
- Strain map left: 1 - 8, 1 each step
- Strain map right: 0 - 8, 1 each step
- Frequency: 5 levels adjustable
- Strain process: 0 - 6, 7 levels available
- Contrast: 0.02 - 2.00, 0.01 each step
- Transparency: 0.10 - 1.00, 0.02 each step
- Persist: 0.02 - 0.98, 0.02 each step
- Histogram analysis: Available

## 6.19 Contrast Imaging

- Real-time retrospective storage and prospective storage
- Display format: single (B), dual (2B)
- Image inversion: up/down, left/right
- Biopsy and biopsy calibration: available
- Two timers
- Flash power%: 1 - 100, 1 each step
- Flash time: 0.1s - 10.0s, 0.1s - 15.0s (VE9-5)
- Dynamic range: 20 - 280, 14 levels adjustable
- Power: 1% - 100%, 100 levels adjustable
- Gray map: 1 - 15, 15 types adjustable
- Chroma: 1 - 15, 15 types adjustable
- $\mu$ -Scan: off, 1 - 5, 6 levels adjustable
- Persist: 0 - 60, 7 levels adjustable
- Sector width: adjustable
- TIC quantitative analysis
  - Time Intensity Curve (TIC) analysis
  - ROI outline: Trace/Ellipse
  - Trace: can be deleted and cleared
  - Curve display: available
  - Parameter display: available
  - Max. ROI: 8
  - Four compound curves: Bolus WIWO, General, Wash In, Wash Out
  - Compound curve: can be hidden

- Cine speed: 7 levels adjustable
- Contrast agent parameter switching: available
- MFI
- MFI Time
- Mix Mode
- MFITime editing and measurement: available
- Contrast HFR: available

## 6.20 Stress Echo

- Protocol: user-defined or selectable
- Acquisition of cardiac sections in different stress levels in terms of selected protocol for advanced and flexible stress echo examination
- Available on phased array probe, under Cardiac preset
- Provides exercise and pharmacological protocol templates
- Continuous acquisition of sections in the template
- Acquired sections selectable for the exam
- Supports comparison among the acquired sections
- Wall motion scoring (bull's eye) and reporting
- Available for suspending the stress echo during scan

## 6.21 G-MQA

- Section type: A2C/A3C/A4C/PLAX/PSAX A/PSAX M/PSAX B
- Trace point: editable
- Motion direction:
  - Long axis: Longitudinal, Radial
  - Short axis: Radial, Rotation, Circumference
- Multiple curve types: Strain, Strain Rate, Velocity, Displacement, Volume
- Bull's eye display
- Peak time display
- Cardiac valve open-close time indication
- Time measurement

## 6.22 R-MQA

- Trace: user-defined and deletable
- Max. ROI: 20
- Four curve types: Strain, Strain Rate, Velocity, Displacement
- Peak time display
- Cardiac valve open-close time indication
- Time measurement

## 6.23 Sono-Help

- Applications: Liver, Kidney, Spleen, Biliary system, Uterine adnexa, Obstetrics, Cardiac, Artery and Vein, Thyroid, Breast, Prostate and testicle
- Available for 82 standard scan planes
- Available for probe position, anatomic diagram and ultrasound reference image display
- User-defined key: available

## 6.24 Sono Assistant

- Available in vascular and obstetrics applications
- Auto workflow protocol
- Templates are user-configurable
- Provides reference sections for carotid, LEA, LEV(DVT) and LEV(Reflux) in vascular
- Provides reference sections for early pregnancy, NT, level I, level II and level III screening in obstetrics
- Ultrasound image display of the standard plane for reference
- Displays unfinished scanning sections in the exam
- Supports imaging mode: B/B+Color/B+PW/B+Color+PW/B+CW/B+Color+CW/B+M/B+Color+M

## 6.25 Sono-Drop

- On-site wireless image transmission
- An interactive app that lets you transfer clinical image from SonoScape ultrasound system to a smart device
- Communication should be established by

scanning the encrypted QR code.

- Transfer images or clips from system to mobile terminal through WiFi

## 6.26 Sono-Synch

- Supports the interconnection of different devices and switching the projection and monitor screens
- Supports the interconnection with PCs and remote adjustment of the parameters of the systems through PCs, starting up different modes
- Supports login in with tablet computers and mobile phones and available for viewing ultrasonograms and functions remotely

## 6.27 Sono-Trans

- Supports directly uploading images and reports to the computer client.

# 7 Measurement/Analysis and Report

## 7.1 Measurement settings

- BSA setting: Eastern, Western
- Cross cursor size: Small, Medium, Large
- Measure line size: Small, Medium, Large
- Distance dash line display: On/Off
- Velocity cross line display: On/Off
- Ellipse cross line display: On/Off
- Volume flow method: TAm<sub>ean</sub>, TAm<sub>ax</sub>
- Volume flow compensation with TAm<sub>ax</sub>: 0.5, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00
- Line ID display: On/Off
- Keep result window: On/Off
- Result font size: Small, Medium, Large
- Result font color: White, Yellow
- Result position: Top Right, Top Left, Bottom Left and Bottom Right adjustable in 2D or M+D mode
- S-Preset: Supports the recognition and switching of kidney and non - kidney diagnostic items, and supports the recognition and switching of thyroid and diagnostic items

- Sono-Detect: Real-time lesions detection, supports automatic prompt of occupied lesions in liver, gallbladder, thyroid and breast

## 7.2 Basic Measurement Package

- Obstetrics measurement package
- Small parts measurement package
- Gynecology measurement package
- Vascular measurement package
- Abdominal measurement package
- Cardiac measurement package
- Urology measurement package
- Pediatrics measurement package
- Pelvic floor measurement package

## 7.3 Report

- Application-specific measurement report
  - ✓ Fetal growth curves
  - ✓ Fetus anatomy evaluation
  - ✓ Fetus compare (four fetuses)
  - ✓ Gynecological pelvic floor report
  - ✓ IOTA(LR2/ADNEX/SRrisk)
  - ✓ Follicle curve
  - ✓ Gynecological anatomy evaluation
  - ✓ BI-RADS
  - ✓ TI-RADS
  - ✓ Stress echo test and bull's eye
- Measurement values: editable
- Measurement results process method: selectable
- Image Insertion
- Report preview
- Comment edit: available
- DICOM send: available
- Report transmission to and from PC: Available
- Report logo (170x60Pixel, bmp): replaceable
- Font size and color settings
- Background color settings
- Display item settings
- Export format: PDF, TXT, RTF, HTML

## 7.4 S-Fetus

- S-Fetus basic (basic edition)
- S-Fetus adv. (advanced edition)
- S-Fetus (meas.)
- S-Fetus pro.
- Supports the recognition of the following sections: Trans. Thalamus, Trans. LV, Trans. Cerebellum, Nose & Lips, Trans. Orbits, Sag. Baby Face, A4CH, LVOT, RVOT, 3VV, 3VVT, Coron. Diaphragm, Trans. Upper Abd, Trans. Abd (Cord insert), Trans. Bladder (UA), Trans. Kidneys, Sag. Right Kidney, Sag. Left Kidney, Bi-Kidneys, Sag. Spine (C&T), Sag. Spine (L&S), Longit. Humerus, Longit. Femur, Coron. Forearm & Hand(L/R), Hand(L/R), Lower Leg/Foot(L/R), TIB/FIB(L/R), Foot(L/R), Placenta-cord insertion
- Supports the automatic measurement of Trans. Thalamus, HC, BPD, Trans. LV, Vp, Trans. Cerebellum Cerebellum cross-section, Cereb., A4CH, Cardiothoracic area ratio, Cardiothoracic diameter ratio, Cardiac axis, Sag. Spine (L&S), Sagittal section of the spine (lumbosacral), Abdominal circumference, Humerus length, Femur length, Placenta thickness, Amniotic fluid depth/ Amniotic fluid index
- Shortcut key: Auto key and user-defined key
- Quality control of section identification
- Supports prompting the confirmation of the left/right direction of foot or hand when scanning the relevant sections of foot or hand

## 7.5 S-GYN

- S-Endo. Auto endometrium thickness measurement
- S-Uterus : Auto recognition and measurement of Uterus Longitudinal Section, Auto recognition and measurement of Uterus Cross Section, Auto annotation of cervix
- S-Follicle: Auto 2D follicle measurement (measurement of all follicles and single follicle); Real time and dynamic follicle counting
- S-Ovary: Auto measurement of Ovary Long Axis Section, Auto measurement of Ovary Short Axis Section
- Auto Uterine : Supports enabling the Auto Uterine function in the 3D pre-activated mode to acquire coronal plane of Uterus

## 7.6 S-PF

- S-Pelvic (2D): Auto anterior compartment evaluation
- S-Pelvic (3D): Auto levator hiatus evaluation
- Rest and Valsalva statuses in 2D mode, Rest, Valsalva and Contraction statuses in 3D mode
- Two reference lines: Screen horizontal line, 135° to the axis of SP
- Supports Auto Levator Hiatus M-Slice
- Supports Auto Anal Sphincter M-Slice
- Supports Auto Subpubic Arch Measurement

## 7.7 S-Liver

- Available in real-time and frozen mode
- Supports manual modification of the measurement results

## 7.8 S-Thyroid

- Available in real-time scan mode and frozen mode
- Auto trace
- Number and trace multiple nodules
- ACR TI-RADS
- Measurements: Nodule Width, Nodule Height, Nodule Length
- Features: Shape, margin, echo, composition, strong echogenic foci
- Touch screen editing
- Result grating
- Images are saved to reports automatically

## 7.9 S-Hip

- S-Hip(acq.)

- S-Hip(meas.)
- $\alpha$  angle,  $\beta$  angle, and FHC
- Rotation 270°, Ger1; Rotation 90°, Ger2
- Measurement results

## 7.10 Auto Measurement

- Auto IMT (real-time IMT and non-real-time IMT)
- Non-real-time IMT: Automatically acquiring a group of measurement data during review or in frozen mode
- Real-time IMT: Automatically acquiring multiple groups of measurement data in real-time mode
- Auto NT
- Auto OBplus  
(AC/HC/HL/FL/BPD/Cereb/Vp/CTAR/CTDR/Cardiac axis/AFI/PL)
- Auto Bladder Volume Measurement
- Auto EF
- AVC Follicle: Auto Follicle, Auto Antral Follicle; Supports follicle grouping

## 8 Storage and Data Management

### 8.1 Storage

- Hard disc storage: 1T
- 2D cine storage time setting:
  - ✓ Prospective storage: 1 - 20s or 1-20 cardiac cycle
  - ✓ Retrospective storage: 1 - 600s or 1-20 cardiac cycle
  - ✓ Freeze storage: 1 - 120s
- 4D cine storage time setting:
  - ✓ Prospective storage: 1 - 600s
  - ✓ Retrospective storage: 1 - 50s
- Directly store to USB drive
- Prospective storage for contrast imaging

### 8.2 Data Management

- Image, video and report sharing service (Samba)
- Export data to USB drive or DVD
- Export format:
  - ✓ System format

- ✓ PC format
- ✓ Image format: BMP, JPG, TIF
- ✓ Cine format: AVI, WMV, MP4
- ✓ Report format: PDF, TXT, HTML, RTF
- ✓ DICOM format
- ✓ DICOMDIR format
- Clipboard: thumbnail display, delete, export
- Create exam, activate exam, resume suspended exam
- Query/Retrieve service
- Review current exam and history exam
- Post-processing and post-measurement
- Backstage storage: quick switch of DICOM cine

## 8.3 Cine Review

- Cine review: frame by frame manual play and auto play with adjustable speed
- One keystroke reviews the first frame or last frame
- Auto play: can be activated/inactivated by using trackball

## 9 Connectivity

### 9.1 I/O Port

- USB port:
  - ✓ USB 3.0: 2
  - ✓ USB 2.0: 4 (one USB port for engineering update)
- Video output port: 8
  - ✓ VGA
  - ✓ RGB
  - ✓ S-VIDEO OUT
  - ✓ S-VIDEO IN
  - ✓ VIDEO OUT
  - ✓ VIDEO IN
  - ✓ DVI OUT
  - ✓ HDMI OUT
- Audio input/output port:
  - ✓ AUDIO IN
  - ✓ AUDIO OUT
- Foot switch input: 1
- Ethernet port: 1
- Video print port: 1
- Physiological signal input port: 1

## 9.2 Video Output Settings

- VIDEO/S-VIDEO (TV-NTSC , TV-PAL)
- VGA/RGB (4:3)
- VGA/RGB (16:9)
- HDMI/DVI (4:3)
- HDMI/DVI (16:9)

## 9.3 Network Connection

- Local network
  - ✓ Local network: On/Off
  - ✓ DHCP or static IP
  - ✓ Static IP: IP, netmask and default gateway settings
  - ✓ MAC address check
  - ✓ Advance: speed (10M, 100M, 1000M, UnKnown!), duplex (Semi Duplex, Full Duplex, UnKnown!)
  - ✓ Speed and duplex search and settings
  - ✓ Ping IP Address
- Wireless network
  - ✓ Wireless network: On/Off
  - ✓ Authentication method: Open, WEP, WPA/WPA2-PSK, WPA-EAP
  - ✓ DHCP or static IP
  - ✓ Static IP: IP, netmask and default gateway settings
  - ✓ MAC address check
  - ✓ WIFI connection, disconnection, refresh, advanced configuration and network adding
  - ✓ Ultrasound hotspot
  - ✓ Switch between ultrasound hotspot and WIFI

## 9.4 DICOM 3.0

- DICOM storage
- DICOM structured report
  - ✓ Gynecology structured report
  - ✓ Obstetrics structured report
  - ✓ Cardiology structured report
  - ✓ Vascular structured report
- DICOM storage commitment
- DICOM Worklist
- DICOM MPPS

- DICOM print
- DICOM Q/R list

## 10 Probe

NOTE: For the following probes that support widescan, bilateral extension is also supported.

### 10.1 Convex Array Probe

- C1-6
  - ✓ Application: Abdomen, OB/Gynecology
  - ✓ Frequency range: 1.0-8.0MHz
  - ✓ Central frequency: 3.2MHz
  - ✓ Curvature radius: 50mm
  - ✓ Transducer element: 160
  - ✓ Field of view: 64°
  - ✓ Widescan (unilateral, 2 levels adjustable): 14°/18°
  - ✓ Depth: ≥40cm
  - ✓ Acoustic lens: 60mm×16mm
  - ✓ Biopsy bracket: NGBC1-6, 15°/24°, sterilizable
- 3C-A
  - ✓ Application: Abdomen, OB/Gynecology
  - ✓ Frequency range: 1.0-7.0MHz
  - ✓ Central frequency: 3.2MHz
  - ✓ Curvature radius: 50mm
  - ✓ Transducer element: 128
  - ✓ Field of view: 60°
  - ✓ Widescan (unilateral, 2 levels adjustable): 13°/17°
  - ✓ Depth: ≥40cm
  - ✓ Acoustic lens: 60mm×18mm
  - ✓ Biopsy bracket: NGB3C-A, 12°/16.5°/22.5°/33.5°, sterilizable
- C2-9
  - ✓ Application: Abdomen, OB/Gynecology
  - ✓ Frequency range: 3.0-10.0MHz
  - ✓ Central frequency: 5MHz
  - ✓ Curvature radius: 43mm
  - ✓ Transducer element: 192
  - ✓ Field of view: 64°
  - ✓ Widescan (unilateral, 2 levels adjustable): 13°/17°
  - ✓ Depth: ≥30cm

- ✓ Acoustic lens: 53mm×13mm
- 6V3
  - ✓ Application: Gynecology, Urology
  - ✓ Frequency range: 3.0-15.0MHz
  - ✓ Central frequency: 6.0 MHz
  - ✓ Curvature radius: 10.3mm
  - ✓ Transducer element: 192
  - ✓ Field of view: 198°
  - ✓ Widescan (unilateral, 2 levels adjustable): 14°/18°
  - ✓ Depth: ≥16 cm
  - ✓ Acoustic lens: 41mm×10mm
  - ✓ Biopsy bracket: NGB6V3, 0°, sterilizable
  - ✓ Temperature control
- 6V7
  - ✓ Application: Gynecology, Urology
  - ✓ Frequency range: 3.0-15.0MHz
  - ✓ Central frequency: 5.7 MHz
  - ✓ Curvature radius: 10.3mm
  - ✓ Transducer element: 192
  - ✓ Field of view: 198°
  - ✓ Widescan (unilateral, 2 levels adjustable): 11°/15°
  - ✓ Depth: ≥16 cm
  - ✓ Acoustic lens: 41mm×10mm
  - ✓ Biopsy bracket: NGB6V7, 15°, sterilizable
  - ✓ Temperature control
- 6V3A
  - ✓ Application: Gynecology, Urology
  - ✓ Frequency range: 3.0-15.0MHz
  - ✓ Central frequency: 6MHz
  - ✓ Curvature radius: 8mm
  - ✓ Transducer element: 128
  - ✓ Field of view: 147°
  - ✓ Depth: ≥12cm
  - ✓ Acoustic lens: 26mm×10mm
- EC9-5
  - ✓ Application: Gynecology, Urology
  - ✓ Frequency range: 3.0-15.0MHz
  - ✓ Central frequency: 6MHz
  - ✓ Curvature radius: 8mm
  - ✓ Transducer element: 128
- ✓ Field of view: 147°
- ✓ Widescan (unilateral, 2 levels adjustable): 12°/15°
- ✓ Depth: ≥16 cm
- ✓ Acoustic lens: 27mm×10mm
- ✓ Temperature control
- ✓ Biopsy bracket: NGBEC9-5, 1.5°, sterilizable
- C613
  - ✓ Application: Abdomen, Cardiology, Pediatric Cardiology
  - ✓ Frequency range: 4.0-13.0MHz
  - ✓ Central frequency: 6.0 MHz
  - ✓ Curvature radius: 14mm
  - ✓ Transducer element: 128
  - ✓ Field of view: 90°
  - ✓ Widescan (unilateral, 2 levels adjustable): 14°/18°
  - ✓ Depth: ≥16 cm
  - ✓ Acoustic lens: 30mm×10mm
  - ✓ Biopsy bracket: NGBC613, 12°/18°/30°, sterilizable
- C322
  - ✓ Application: Abdomen
  - ✓ Frequency range: 2.0-7.0MHz
  - ✓ Central frequency: 3.5MHz
  - ✓ Curvature radius: 20mm
  - ✓ Transducer element: 128
  - ✓ Field of view: 76°
  - ✓ Widescan (unilateral, 2 levels adjustable): 12°/16°
  - ✓ Depth: ≥24cm
  - ✓ Acoustic lens: 32mm×11mm
  - ✓ Biopsy bracket: NGBC322, 5°/25°, sterilizable
- BCL10-5
  - ✓ Application: Urology
  - ✓ Frequency range: 4.0-16.0MHz
  - ✓ Biopsy bracket: NGBBCL10-5, 90°; biopsy depth (linear array): 10mm-50mm, sterilizable
- Convex array:
  - ✓ Central frequency: 6MHz
  - ✓ Curvature radius: 10mm

- ✓ Transducer element: 192
- ✓ Field of view: 200°
- ✓ Depth:  $\geq 15$ cm
- ✓ Acoustic lens: 40mm $\times$ 10mm

#### Linear array:

- ✓ Central frequency: 7.5MHz
- ✓ Transducer element: 192
- ✓ Width of view: 60mm
- ✓ Depth:  $\geq 10$ cm
- ✓ Acoustic lens: 63mm $\times$ 9mm

- BCC9-5

- ✓ Application: Urology
- ✓ Frequency range: 3.0-15.0MHz
- ✓ Biopsy bracket: NGBBCC9-5, sterilizable

#### Convex array:

- ✓ Central frequency: 6MHz
- ✓ Curvature radius: 10mm
- ✓ Transducer element: 128
- ✓ Field of view: 140°
- ✓ Depth:  $\geq 15$ cm
- ✓ Acoustic lens: 26mm $\times$ 10mm

## 10.2 Linear Array Probe

- 12L-A

- ✓ Application: Peripheral Vascular, Superficial, and Small parts
- ✓ Frequency range: 3.0-17.0MHz
- ✓ Central frequency: 8.0 MHz
- ✓ Transducer element: 256
- ✓ Width of view: 51mm
- ✓ Depth:  $\geq 12$ cm
- ✓ B steer: -30°-30°
- ✓ ROI steer/sample line steer: 0°/ $\pm 16^\circ$ / $\pm 20^\circ$ / $\pm 30^\circ$  (some modes: 0°/ $\pm 12^\circ$ / $\pm 20^\circ$ / $\pm 30^\circ$ )
- ✓ Trapezoid imaging (unilateral, 2 levels adjustable): 14°/17°
- ✓ Acoustic lens: 55mm $\times$ 8mm
- ✓ Biopsy bracket: NGB12L-A, 44°/53°/64°, sterilizable

- 12L-B

- ✓ Application: Peripheral Vascular, Superficial, and Small parts
- ✓ Frequency range: 3.0-17.0MHz

- ✓ Central frequency: 8.0 MHz
  - ✓ Transducer element: 192
  - ✓ Width of view: 38mm
  - ✓ Depth:  $\geq 11$ cm
  - ✓ B steer: -30°-30°
  - ✓ ROI steer/sample line steer: 0°/ $\pm 16^\circ$ / $\pm 20^\circ$ / $\pm 30^\circ$  (some modes: 0°/ $\pm 12^\circ$ / $\pm 20^\circ$ / $\pm 30^\circ$ )
  - ✓ Trapezoid imaging (unilateral, 2 levels adjustable): 14°/17°
  - ✓ Acoustic lens: 42mm $\times$ 7mm
  - ✓ Biopsy bracket: NGB12L-B, 39°/48°/60°, sterilizable
- 9L-A
- ✓ Application: Peripheral Vascular, Superficial, and Small parts
  - ✓ Frequency range: 2.0-13.0MHz
  - ✓ Central frequency: 6.0 MHz
  - ✓ Transducer element: 128
  - ✓ Width of view: 35mm
  - ✓ Depth:  $\geq 11$ cm
  - ✓ B steer: -30°-30°
  - ✓ ROI steer/sample line steer: 0°/ $\pm 16^\circ$ / $\pm 20^\circ$ / $\pm 30^\circ$  (some modes: 0°/ $\pm 12^\circ$ / $\pm 20^\circ$ / $\pm 30^\circ$ )
  - ✓ Trapezoid imaging (unilateral, 2 levels adjustable): 12°/18°
  - ✓ Acoustic lens: 42mm $\times$ 9mm
  - ✓ Biopsy bracket: NGB9L-A, 38°/47°/59°, sterilizable

## 10.3 Phased Array Probe

- S1-5

- ✓ Application: Cardiology
- ✓ Frequency range: 1.0-7.0MHz
- ✓ Central frequency: 2.7 MHz
- ✓ Transducer element: 80
- ✓ Field of view: 90°
- ✓ Depth:  $\geq 30$ cm
- ✓ Acoustic lens: 25mm $\times$ 16mm
- ✓ Biopsy bracket: NGBS1-5, 11.5°/18°/28°, sterilizable

- 4P-A

- ✓ Application: Cardiology
- ✓ Frequency range: 1.0-6.0MHz

- ✓ Central frequency: 2.7MHz
- ✓ Transducer element: 80
- ✓ Field of view: 90°
- ✓ Depth: ≥30cm
- ✓ Acoustic lens: 25mm×16mm
- ✓ Biopsy bracket: NGB4P-A, 14°/26°, sterilizable
- 7P-A
  - ✓ Application: Pediatric Cardiology
  - ✓ Frequency range: 2.0-9.0MHz
  - ✓ Central frequency: 4.5MHz
  - ✓ Transducer element: 96
  - ✓ Field of view: 90°
  - ✓ Depth: ≥23cm
  - ✓ Acoustic lens: 21mm×12mm
- 8P1
  - ✓ Application: Pediatric Cardiology
  - ✓ Frequency range: 4.0-12.0MHz
  - ✓ Central frequency: 6.5MHz
  - ✓ Transducer element: 96
  - ✓ Field of view: 90°
  - ✓ Depth: ≥16cm
  - ✓ Acoustic lens: 13mm×10mm

## 10.4 Volume Probe

- VC6-2
  - ✓ Application: Abdomen, Obstetrics
  - ✓ Frequency range: 1.0-7.0MHz
  - ✓ Central frequency: 3.75MHz
  - ✓ Curvature radius: 40mm
  - ✓ Field of view: 68°
  - ✓ Widescan: 12°/16°
  - ✓ Transducer element: 128
  - ✓ Depth: ≥30cm
  - ✓ Acoustic window: 150mm×86mm
- VE9-5
  - ✓ Application: OB/Gynecology
  - ✓ Frequency range: 2.0-13.0MHz
  - ✓ Central frequency: 6.0MHz
  - ✓ Curvature radius: 10.3mm
  - ✓ Field of view: 182°
  - ✓ Widescan (unilateral, 2 levels adjustable): 11°/15°
  - ✓ Transducer element: 180
  - ✓ Depth: ≥15cm

- ✓ Acoustic window: 39mm×39mm

## 10.5 Specialty Probe

- 10I2
  - ✓ Application: Peripheral Vascular, Superficial, Small parts and Intraoperative
  - ✓ Frequency range: 4.0-16.0MHz
  - ✓ Central frequency: 7.5MHz
  - ✓ Width of view: 25mm
  - ✓ Transducer element: 96
  - ✓ Depth: ≥11cm
  - ✓ ROI steer/sample line steer: 0°/±16°/±20° (some modes: 0°/±12°/±20°)
  - ✓ Trapezoid imaging (unilateral, 2 levels adjustable): 14°/18°
  - ✓ Acoustic window: 28mm×10mm
- CWD2.0
  - ✓ Application: Trans-cranial
  - ✓ Central frequency: 2MHz
  - ✓ Transducer element: 2
  - ✓ Acoustic window: Φ20mm
- CWD5.0
  - ✓ Application: Trans-cranial
  - ✓ Central frequency: 5MHz
  - ✓ Transducer element: 2
  - ✓ Acoustic window: Φ14mm

## 11 Peripheral Devices and Accessories

### 11.1 Printer

- Printer types
  - ✓ Color ink jet printer
  - ✓ B/W video printer
  - ✓ Color video printer
- Print types
  - ✓ Video print
  - ✓ Network print
  - ✓ USB print
  - ✓ Windows print
- Add printer
- Available printer models:
  - ✓ Sony 898
  - ✓ Hp m252n

- ✓ Brother DCP-710
- ✓ Cannon CP1300
- ✓ CP1500
- ✓ HP Color LaserJet CP1515n
- ✓ MITSUBISHI P95
- ✓ EPSON L130
- ✓ EPSON L8050
- ✓ Sumsung Xpress M2029
- ✓ HP Ink Tank Wireless 411
- ✓ HP Ink Tank 319

## 11.2 Foot Switch

- 2 pedals
- Foot switch: available
- User-defined short-cut keys

## 11.3 USB Bar Code Scanner

- Bar code input

## 11.4 DVD R/W Drive

- Export patient data to DVD
- Import patient data from DVD

## 12 Safety and Certification

- Certification: ISO 9001, ISO 13485
- Comply with:
  - ✓ EN 60601-1 and IEC 60601-1
  - ✓ EN 60601-1-2 and IEC 60601-1-2
  - ✓ EN 60601-1-6 and IEC 60601-1-6
  - ✓ EN 60601-2-37 and IEC 60601-2-37
  - ✓ EN 62304 and IEC 62304
  - ✓ EN 62366-1 and IEC 62366-1
- CE announcement: this system is consistent with EU medical devices directive 93/42/EEC. The code (0197) following CE logo is the number of the notified body by EU, which proves the system is consistent with the directive 93/42/EEC.

### NOTE:

- This specification applies to the most comprehensive technical parameters for all models within this series, and for the differential configurations between

specific models, please refer to the sales functional configuration table.

- The products or features mentioned in this document may not be commercially available in all countries. Due to regulatory reasons, their future availability cannot be guaranteed.
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# **SonoScape**

**Manufacturer: SonoScape Medical Corp.**

**Address: Room 201 & 202, 12th Building, Shenzhen Software Park Phase II, 1 Keji Middle 2nd Road, Yuehai Subdistrict, Nanshan District, Shenzhen, 518057, Guangdong, China**

**Tel: +86-755-26722890**

**Fax: +86-755-26722850**

**E-mail: [sonoscape@sonoscape.net](mailto:sonoscape@sonoscape.net)**

**[www.sonoscape.com](http://www.sonoscape.com)**