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**Title | P40 Elite Series Technical Specifications**

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A male doctor with a goatee, wearing a white lab coat over blue scrubs, is seated at a SonoScape ultrasound machine. He is looking towards the right side of the frame, where a large monitor is visible. His right hand is on the control panel of the machine, which features a keyboard and various buttons. The background consists of light-colored vertical blinds. The SonoScape logo is in the top right corner.

**SonoScape**

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

901-08212-A06

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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

### Standard 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

### Optional Features

- 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

## 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:  $\pm 40^\circ$
- 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:  $\pm 110^\circ$
  - 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:  $\pm 50^\circ$

### 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)

## ✧ Working Environment

- Temperature: 0 °C to 45 °C (10 °C to 45 °C when used with 4D probe)
- Relative humidity:  $\leq$ 90%RH
- Atmospheric pressure: 700hPa - 1060hPa
- System noise:  $\leq$  55dB

## 2.9 Storage and Transportation Environment

- Temperature: -20 °C to +55 °C
- Relative humidity:  $\leq$ 95%RH
- 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: 1 - 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: 1.0 - 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)
- 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,

## 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

- 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

## 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 S-Spine

- Automatic adjustment of ROI
- Automatic identification and imaging of fetal spine

## 6.14 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

## 6.15 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

## 6.16 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

## 6.17 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

## 6.18 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

## 6.19 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 - 7, 1 each step
- Strain map right: 0 - 7, 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

## 6.20 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
- MFI Time editing and measurement: available
- Contrast HFR: available

## 6.21 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

## 6.22 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

## 6.23 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

## 6.24 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

## 6.25 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

## 6.26 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

# 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>mean</sub>, TAm<sub>max</sub>
- Volume flow compensation with TAm<sub>max</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

## 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
  - ✓ 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
- Supports enabling the Auto Uterine function in the 3D pre-activated mode

## 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

## 8 Storage and Data Management

### 8.1 Storage

- Hard disc storage: 2T
- 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

- 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: ≥15cm
- ✓ Acoustic lens: 40mm×10mm

Linear array:

- ✓ Central frequency: 7.5MHz
- ✓ Transducer element: 192
- ✓ Width of view: 60mm
- ✓ Depth: ≥10cm
- ✓ Acoustic lens: 63mm×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: ≥15cm
- ✓ Acoustic lens: 26mm×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: ≥12cm
- ✓ B steer: -30 °/30 °
- ✓ ROI steer/sample line steer: 0 °/±16 °/±20 °/±30 °(some modes: 0 °/±12 °/±20 °/±30 °)
- ✓ Trapezoid imaging (unilateral, 2 levels adjustable): 14 °/17 °
- ✓ Acoustic lens: 55mm×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: ≥11cm
- ✓ B steer: -30 °/30 °
- ✓ ROI steer/sample line steer: 0 °/±16 °/±20 °/±30 °(some modes: 0 °/±12 °/±20 °/±30 °)
- ✓ Trapezoid imaging (unilateral, 2 levels adjustable): 14 °/17 °
- ✓ Acoustic lens: 42mm×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:  $-30^{\circ}$   $-30^{\circ}$
- ✓ ROI steer/sample line steer:  
 $0^{\circ} \pm 16^{\circ} \pm 20^{\circ} \pm 30^{\circ}$  (some  
modes:  $0^{\circ} \pm 12^{\circ} \pm 20^{\circ} \pm 30^{\circ}$ )
- ✓ Trapezoid imaging (unilateral, 2 levels  
adjustable):  $12^{\circ} \pm 18^{\circ}$
- ✓ Acoustic lens: 42mm $\times$ 9mm
- ✓ Biopsy bracket: NGB9L-A,  
 $38^{\circ} \pm 47^{\circ} \pm 59^{\circ}$ , sterilizable
- LAP7
  - ✓ Application: Laparoscopic
  - ✓ Frequency range: 3.0-15.0MHz
  - ✓ Central frequency: 7.0 MHz
  - ✓ Transducer element: 128
  - ✓ Width of view: 39mm
  - ✓ Depth:  $\geq 11$ cm
  - ✓ B steer:  $-30^{\circ}$   $-30^{\circ}$
  - ✓ ROI steer/sample line steer:  
 $0^{\circ} \pm 12^{\circ} \pm 20^{\circ} \pm 30^{\circ}$
  - ✓ Trapezoid imaging (unilateral, 2 levels  
adjustable):  $14^{\circ} \pm 18^{\circ}$
  - ✓ Acoustic lens: 42mm $\times$ 10mm
  - ✓ Temperature control

### 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:  $90^{\circ}$
  - ✓ Depth:  $\geq 30$ cm
  - ✓ Acoustic lens: 25mm $\times$ 16mm
  - ✓ Biopsy bracket: NGBS1-5,  
 $11.5^{\circ} \pm 18^{\circ} \pm 28^{\circ}$ , sterilizable
- 4P-A
  - ✓ Application: Cardiology
  - ✓ Frequency range: 1.0-6.0MHz
  - ✓ Central frequency: 2.7MHz
  - ✓ Transducer element: 80

- ✓ Field of view:  $90^{\circ}$
- ✓ Depth:  $\geq 30$ cm
- ✓ Acoustic lens: 25mm $\times$ 16mm
- ✓ Biopsy bracket: NGB4P-A,  
 $14^{\circ} \pm 26^{\circ}$ , sterilizable
- 7P-A
  - ✓ Application: Pediatric Cardiology
  - ✓ Frequency range: 2.0-9.0MHz
  - ✓ Central frequency: 4.5MHz
  - ✓ Transducer element: 96
  - ✓ Field of view:  $90^{\circ}$
  - ✓ Depth:  $\geq 23$ cm
  - ✓ Acoustic lens: 21mm $\times$ 12mm
- MPTEE
  - ✓ Application: Cardiology
  - ✓ Frequency range: 4.0-13.0MHz
  - ✓ Central frequency: 4.5MHz
  - ✓ Transducer element: 64
  - ✓ Field of view:  $10^{\circ}$   $-90^{\circ}$
  - ✓ Depth:  $\geq 15$ cm
  - ✓ Electric extension:  $120^{\circ}$

### 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:  $68^{\circ}$
  - ✓ Widescan:  $12^{\circ} \pm 16^{\circ}$
  - ✓ Transducer element: 128
  - ✓ Depth:  $\geq 30$ cm
  - ✓ Acoustic window: 150mm $\times$ 86mm
- VE9-5
  - ✓ Application: OB/Gynecology
  - ✓ Frequency range: 2.0-13.0MHz
  - ✓ Central frequency: 6.0MHz
  - ✓ Curvature radius: 10.3mm
  - ✓ Field of view:  $182^{\circ}$
  - ✓ Widescan (unilateral, 2 levels adjustable):  
 $11^{\circ} \pm 15^{\circ}$
  - ✓ Transducer element: 180
  - ✓ Depth:  $\geq 15$ cm
  - ✓ Acoustic window: 39mm $\times$ 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:  $\geq 1$ cm
- ✓ ROI steer/sample line steer:  $0^\circ \pm 16^\circ \pm 20^\circ$  (some modes:  $0^\circ \pm 12^\circ \pm 20^\circ$ )
- ✓ Trapezoid imaging (unilateral, 2 levels adjustable):  $14^\circ 18^\circ$
- ✓ Acoustic window: 28mm  $\times$  10mm
- CWD2.0
- ✓ Application: Trans-cranial
- ✓ Central frequency: 2MHz
- ✓ Transducer element: 2
- ✓ Acoustic window:  $\Phi 20$ mm
- CWD5.0
- ✓ Application: Trans-cranial
- ✓ Central frequency: 5MHz
- ✓ Transducer element: 2
- ✓ Acoustic window:  $\Phi 14$ mm

## 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:

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