

# DC-80

## Color Doppler Ultrasound System

### X-Insight

Specification

Release 02.00.00



# 1. System Overview

## 1.1 Application

- Abdomen/General
- Obstetrics
- Gynecology
- Cardiology
- Small parts
- Urology
- Vascular
- Pediatrics
- Nerve
- Emergency&Critical
- Others

## 1.2 Transducer types

- Curved array transducer
- Linear array transducer
- Phased array transducer
- 4D Volume transducer
- TEE transducer
- Pencil transducer

## 1.3 Transducer technology

- ComboWave transducers
- 3T transducers
- 3T with single crystal transducers

## 1.4 Imaging modes

- B-Mode
- THI and PSH™ (Phase Shift Harmonic Imaging)
- M-Mode/Color M-mode
- Free Xros M™ (Anatomical M-mode)
- Free Xros CM™ (Curved Anatomical M-mode)
- Color Doppler Imaging
- Power Doppler Imaging / Directional PDI
- Pulsed Wave Doppler
- Continuous Wave Doppler
- TDI
- UWN+ (Ultra Wideband Non-linear Plus) Contrast Imaging™
- Smart 3D™ (Freehand 3D)
- 4D
- iScape™ View (Panoramic Imaging)
- STE Imaging (Sound Touch Elastography)
- STQ Imaging (Sound Touch Quantification)
- Natural Touch Elastography Imaging

- Stress Echo

## 1.5 Features

- B-Mode
- THI and PSH™
- M-Mode and Color M Mode
- Color Doppler Imaging
- Power Doppler Imaging and Directional PDI
- Pulsed Wave Doppler
- Continuous Wave Doppler
- Free Xros M™
- Free Xros CM™
- iBeam™ (Spatial Compound Imaging)
- iClear™ (Speckle Suppression Imaging)
- iTouch™ (Auto Image Optimization)
- Echo Boost™
- Zoom/iZoom (Full Screen Zoom)
- FCI (Frequency Compound Imaging)
- B steer
- ExFOV (Extended Field of View)
- Smart 3D™
- Color 3D
- Real-time 4D
- STIC (Spatial-Temporal Image Correlation)
- iPage+ (Multi-Slice Imaging)
- iLive
- SCV+ (Slice Contrast View)
- Niche
- Smart Planes CNS
- Smart Face
- Smart FLC
- Smart-V™ (Smart Volume)
- Smart OB™ (Auto OB measurement)
- Smart NT™ (Auto NT measurement)
- Clinical Measurement Package
- HR Flow™ (High Resolution Flow)
- Smart Track
- V-Mapping
- IMT
- IVF
- Smart Pelvic
- iScape™ View
- iNeedle™ ( Needle Visualization Enhancement)
- iCompare
- UWN+ Contrast Imaging™

- Contrast Imaging QA (Quantitative Analysis)
  - STE Imaging (Sound Touch Elastography)
  - STQ Imaging (Sound Touch Quantification)
  - Natural Touch Elastography Imaging
  - Ultrasound Fusion imaging
  - Fusion RESP
  - ECG function
  - Auto EF
  - TDI (Include TVI, TVD, TVM, TEI)
  - TDI QA (TDI Quantitative Analysis)
  - TT QA (Tissue Tracking Quantitative Analysis)
  - LVO (Left Ventricular Opacification)
  - Glazing Flow
  - Stress Echo
  - iStorage
  - iWorks™ ( Auto Workflow Protocol)
  - DICOM
  - McAfee
  - MedSight
  - MedTouch
  - Touch gestures
  - 1TB hard drive
  - 128G SSD (Solid State Drive)
  - DVR Module
  - 6-USB ports
- 1.6 Language support
- Software: English, Chinese, German, Spanish, French, Italian, Portuguese, Russian, Czech, Polish, Turkish, Finnish, Danish, Icelandic, Norwegian, Swedish, Hungarian, Serbian, Greek, Lithuanian, Dutch
  - Keyboard input: English, Chinese, German, Spanish, French, Italian, Portuguese, Russian, Czech, Polish, Icelandic, Norwegian, Swedish, Finnish, Turkish, Danish, Hungarian, Serbian
  - Control panel overlay: French, German, Spanish, Italian, Russian, Portuguese, Polish, Turkish
  - User manual: English, Chinese, German, Spanish, French, Italian, Serbian, Russian, Polish, Turkish

## 2 Physical Specification

- 2.1 Dimension and weight
- 21.5 inch monitor: 920±10mm (depth) x 470±10mm (main unit)/580±10mm (control panel)/533±10mm (display) (width) x 1355±10mm~1800±10mm (height)
  - 23.8 inch monitor: 920±10mm (depth) x 470±10mm (main unit)/580±10mm (control panel)/575±10mm (display) (width) x 1355±10mm~1800±10mm (height)
  - Weight: 108.5kg
- 2.2 Audio speakers
- Stereo audio speakers
- 2.3 Monitor with unique dual-wing floating arm
- Rotate angle: 90 degrees to the left and 150 degrees to the right along with the support arm
  - Up: 150mm
  - Front/back: 300mm
- 2.4 Wheels
- Diameter: 125mm
  - Front castor (2 ea): total lock and break
  - Rear castor (2 ea): right one for total lock and break; left one for swivel lock
- 2.5 Transducer port and holder
- Transducer ports with dust prevention: Up to 5 active ports (optional), 1 more for pencil probe only
  - Transducer holder: 5 (one for pencil transducer), plus 1 dedicated endocavity transducer holder
- 2.6 Electrical power
- Voltage: 100-127V~, or 220-240V~
  - Frequency: 50/60 Hz
  - Power consumption: Max. 800VA
  - Circuit breaker: 100V~, 10A
- 2.7 Operating Environment
- Ambient temperature: 0-40 °C
  - Relative humidity: 30%-85% (no condensation)

- Atmospheric pressure: 700hPa-1060hPa

## 2.8 Storage & Transportation

### Environment

- Ambient temperature: -20-55 °C
- Relative humidity: 30%-95% (no condensation)
- Atmospheric pressure:700hPa-1060hPa

## 3 User Interface

### 3.1 Floating control panel

- Brightness adjustable for the backlight of the whole control panel
- Full-sized, backlit QWERTY keyboard
- 8 programmable keys
- 8-segment TGC control
- -Rotate angle range: 180 degrees
- -Down/up:  $200 \pm 20$  mm

### 3.2 Monitor

- 21.5 or 23.8 inch high resolution color LED monitor
- Resolution: 1920x1080
- Viewing angle:  $\geq 170$  degrees
- Digital brightness and contrast adjustment through preset
- Tile/Rotate independent adjustment:
- Tilt angle range:110 degrees
- Rotate angle range: 180 degrees

### 3.3 Touch screen

- 13.3-inch high sensitivity anti-glare color touch screen
- Resolution: 1920x1080
- Digital brightness and contrast adjustment through preset
- Angel adjustable range: 30 degrees
- Viewing angle:  $\geq 170$  degrees
- Support touch screen gestures
- Support either hand writing or with gloves on

### 3.4 Touch gestures

- Swipe down/up: display/remove projected image on touch screen
- Swipe horizontally: page up/down or review images/cine loops one by one
- Swipe from left edge to right:

display hidden menu on projected image.

- Image parameter adjustment.
- Measurement on projected image on touch screen
- Zoom in/ out the projected image on touch screen
- Rotate or erase on projected 3D/4D image on touch screen
- 8 user defined gestures using two fingers for more functions, such as freeze, save, print, activate specific imaging modes, measurements, and some other special functions.
- Touch screen menu layout editable

### 3.5 System boot-up

- Boot-up from shut-down: < 90sec
- Boot-up from stand-by: < 15 sec
- Shut-down: < 25sec

### 3.6 Comments

- Supports text input and arrow
- Voice annotation: record voice as annotation for images and cine
- Support freehand marking on touch screen
- Adjustable text size and arrow size
- Supports home position
- Covers various application
- User customizable

### 3.7 Bodymark

- More than 214 bodymarks for versatile application
- User customizable

## 4 Imaging Parameters

### 4.1 Overview

- Up to 82944 channels

### 4.2 B-mode

- Display formats
- iClear™
- iBeam™
- iTouch™
- FCI (Frequency Compound Imaging)
- Dual Live
- Image quality
- B steer
- ExFOV
- Depth
- Frame rate

- Acoustic output power
  - TGC
  - LGC
  - Dynamic range
  - Gain
  - Focus number
  - Focus position
  - FOV
  - Line density
  - Persistence
  - Horizontal Scale
  - L/R flip and U/D flip
  - Rotation
  - TSI
  - Gray Map
  - Tint map
  - Echo Boost
  - Ref. Lline
  - Auto merge
  - Dehaze
- 4.3 THI and PSH™
- Available on all types of transducers
  - Patent PSH™ technology, obtains purer harmonic, better contrast resolution, higher SNR, exceptional high frequency harmonic
  - iClear™ available
  - Image quality
  - Echo Boost™
- 4.4 M-mode
- Display formats
  - Color M-mode available
  - Acoustic output power
  - Dynamic range
  - Gain
  - M sweep speed
  - M soften
  - Tint map
  - Gray Map
  - Edge enhancement
- 4.5 Color Doppler Imaging
- Dual live
  - HR Flow™
  - Image quality
  - Max velocity
  - Steer
  - Max frame rate
  - Acoustic output power
  - Gain
- ROI size/ position
  - Scale
  - Baseline
  - Wall filter
  - PRF
  - Packet size
  - Flow state
  - Smooth
  - B/C align
  - Priority
  - Color map
  - Invert
  - Auto Invert
  - Persistence
  - Velocity tag
  - Line density
  - iTouch™
  - Smart track
  - Glazing flow
- 4.6 Power Doppler Imaging
- Dual live
  - HR Flow™
  - Support directional power Doppler
  - Image quality
  - Acoustic output power
  - Dynamic range
  - Gain
  - ROI size/ position
  - Steer
  - Scale
  - Wall filter
  - PRF max
  - Packet size
  - Flow state
  - Smooth
  - B/C align
  - Priority
  - Color map
  - Directional color map
  - Persistence
  - Line density
  - Invert
  - iTouch™
  - Smart track
  - Glazing flow
- 4.7 PW/ CW Mode
- Display formats
  - Image quality
  - PW velocity

- CW velocity
  - Sample volume size:
  - Sample gate depth:
  - Baseline
  - PW Steer
  - Volume
  - PW PRF
  - CW PRF
  - Gain
  - Dynamic range
  - Sweep speed
  - Wall filter
  - Invert
  - Auto invert
  - Angle correction
  - Quick angle
  - Gray map
  - Tint map
  - Time/ frequency resolution
  - Auto calc
  - Auto calc cycle
  - Trace Sensitivity
  - Trace Smooth
  - Trace area
  - HPRF
  - Free Xros M™
  - Display formats
  - Color Free Xros M available
  - Up to 3 lines
  - Display all lines
  - Sweep speed
  - M Tint map
  - Gray Map
- 4.8 Free Xros CM™
- Only available in TDI mode
  - Display formats
  - Acoustic output power
  - Gain
  - Sweep speed
  - Tint map
  - Gray Map
  - Edit, undo, delete function for curved line
- 4.9 iBeam™
- Spatial compound imaging
  - 9 angles maximum
- 4.10 iClear™
- Speckle suppression imaging
  - Available on B, 3D, 4D mode
- 4.11 iTouch™
- Auto image optimization
  - B-mode
  - Color
  - Power
  - PW
  - Contrast imaging
- 4.12 Echo Boost™
- Available on phased array transducers (P4-2NE, P7-3E, P10-4E and SP5-1E) in cardiac exam mode and all linear transducers
  - Improve the homogeneity through the whole field of view
  - Better noise control in cardiac chambers and muscles
- 4.13 Zoom
- Zoom: Spot zoom (write zoom) 10x, Pan zoom (read zoom) 0.8x-10x
  - iZoom: convertible 3 steps; normal image, zoom standard area, zoom only image area
- 4.14 QSave
- Quick save image parameter setting after image adjustment done
  - Support Save, Save as, Restore
- 4.15 Tissue Velocity/ Energy Imaging (included in TDI option)
- Available on phased array transducer
  - Dual live
  - Max frame rate
  - PRF
  - Acoustic output power
  - Gain
  - Dynamic range
  - ROI size/ position
  - Scale
  - Baseline
  - Wall filter
  - Packet size
  - Tissue state
  - Smooth
  - B/C align
  - Priority
  - Color map
  - Invert
  - Persistence
  - Velocity tag

- Line density
- Image quality

#### 4.16 Tissue Velocity Doppler (included in TDI option)

- Available on phased array transducer
- Display formats
- Sample volume size
- Sample gate depth
- Scale
- PRF
- Gain
- Dynamic range
- Sweep speed
- Wall filter
- Invert
- Angle correction
- Quick angle:
- Gray map
- Tint map
- Image quality
- Time/ frequency resolution

#### 4.17 Tissue Velocity Motion (included in TDI option)

- Display formats
- Acoustic output power
- Gain
- M sweep speed
- Smooth
- Color Map
- Image quality
- Persistence
- Package size
- Priority
- Velocity tag
- Tissue state
- Smart 3D™
- Smart 3D
  - Acquisition Method: Rocked, Linear
  - iClear
  - VR Refine
  - VR: on/off, select volume rendered image
  - MPR
  - Display formats
  - VOI
  - Reset
  - Active quadrant
  - VR orientation

- Inversion
- Accept VOI
- Flip
- Sync
- Render modes
- View direction
- Threshold
- MagiClean
- Depth VR
- Thickness
- Opacity
- Smooth
- Tint
- Gray map
- Brightness
- Contrast
- Surface enhancement
- Move light
- Tool: Auto rotation
  - Rotation control
  - Direction
  - Position
  - Speed
  - Step

- Edit
  - Eraser
  - Eraser Diameter
  - Cut (area selection)
  - Undo

#### 4.18 4D

- Available on all volume transducers
- Static 3D and 4D
  - 4D frame rate
  - VR Refine
  - VR
  - MPR
  - Display formats
  - VOI
  - Reset
  - Active quadrant
  - VR orientation
  - Inversion
  - Accept VOI
  - Flip
  - Sync
  - Render modes
  - View direction
  - Threshold
  - Thickness

- MagiClean
- Depth VR
- Opacity
- Smooth
- Brightness
- Contrast
- Tint
- Surface enhancement
- Move light
- Color 3D
  - Available on all volume transducers
  - Supports Color and Power mode
- STIC
  - Color STIC available
  - Available on D7-2E, D8-2E
  - Acquiring Time
  - Support iPage<sup>+</sup> viewing
  - CMPR available
  - SCV<sup>+</sup> available
  - 3 Slice and Niche available
  - Smart Planes CNS available
  - Smart-V available
  - Smart FLC available
  - Edit available
- iPage<sup>+</sup>
  - Slice display mode
  - Slice cut direction
  - Slice layout
  - Active quadrant
  - Reset
  - Spacing
  - Thickness
  - Slice Number
  - Slice Position
  - Brightness
  - Contrast
- SCV<sup>+</sup>™
  - Display mode
  - Reset
  - SCV+
  - CMPR
  - Thickness
  - Rotate RL
  - Active quadrant
  - Brightness
  - Contrast
  - Reverse
  - SCV Enhance
  - Opacity
- Trace Options
- MPR Measurement types
- Support labeled measurements
- 3D Layout
  - 3 Slice
  - Niche
  - Reset: All, Reset Curve, Reset Ori
  - Active Quadrant: A, B, C, Niche/ 3 Slice
  - Niche Views
- iLive
  - Shading
  - Move Light
  - Light Position
  - HDView
  - Grad View
  - Hyaline
- Smart Planes CNS
  - Only supported by D7-2E, D8-2E in OB2 and OB3 exam mode
  - Detect automatically the standard sections of TCP, TTP, MSP and TVP
  - Rotation around X/ Y/ Z axes
  - Reference line
  - Reset
  - Thickness
  - Brightness
  - Contrast
  - Auto comment supported
  - Auto measurement supported
  - TCD and CM on section TCP;
  - BPD, OFD and HC on section TTP;
  - LVW on section TVP
  - Support editing measurement results
  - Hide/show measurement results
  - Support comment and bodymark on sectional plane
- Smart FLC (Smart Follicle)
  - Automatic follicle calculation
  - Edit ROI and detect follicle contour automatically
  - Undo
  - Active Quadrant
  - Calc
  - Edit
  - Edit
- Auto rotation
  - Rotation control



- Direction
  - Speed
  - Step
  - Edit:
  - Area selection
  - Undo
  - Eraser
  - Eraser Diameter
  - Smart-V™ (Smart Volume)
    - Auto 3D volume calculation
    - Manual ROI on A, B, C plane separately
    - Auto detect contour of target
    - Reset
    - Active Quadrant
  - Smart Face
    - Recognize fetal face automatically and then display the face in a recommended viewing angle
    - MixRender
    - EnvTint
    - Eraser
    - AutoDirect
    - FaceContact
    - VR Orientation
- 4.19 Smart Track
- Available on linear probes in Upper Ext Artery, Upper Ext Vein, Lower Ext Artery, Lower Ext Vein, carotid, IMT, EM Vascular exam
  - Enable the function under Color/Power mode, the angle and the position of the ROI are adjusted automatically.
  - Enable the function under Color/Power/ PW Triplex mode, the angle and the position of the PW sampling line, SV size, SV angle and SV position are adjusted automatically.
- 4.20 iScape™ View
- Acquisition method
  - Supports speed indicator
  - Actual size
  - Fit size
  - Ruler
  - Tint map
  - Rotation
- 4.21 iNeedle
- Needle visualization enhancement
  - Needle direction
  - B/iNeedle
- 4.22 iCompare
- Allow to compare real-time ultrasound imaging to the past DICOM CT/MRI/Mammography/X-Ray/Ultrasound images without external workstation
  - Helpful to easily evaluate and follow up the progression of disease, treatment effect monitoring...
- 4.23 UWN+ Contrast Imaging™\*
- UWN+ (Ultra Wideband Non-linear Plus) contrast imaging technology, which provides exceptional contrast agent detecting capability, not only extracts second harmonic, but also non-linear fundamental signals
  - Available on C5-1E, L14-5WE, L9-3E, V11-3HE, C7-3E, L12-3E, DE11-3E, SP5-1E, SC5-1E, C6-2GE, V11-3E, V11-3BE, SC6-1E, DE10-3WE probes
  - Supports Low MI contrast imaging
  - Micro Flow Enhancement (MFE) available
  - Timer1
  - Timer2
  - Pro capture
  - Retro capture
  - Dual live
  - MFE
  - MFE period
  - Destruct
  - Destruct AP
  - Destruct time
  - iClear
  - Mix
  - Mix map
  - Persistence
  - Dynamic range
  - Gray map
  - Tint map
  - Supports U/D Flip and L/R Flip
  - Rotation
  - Line density
  - ExFov
  - Gain
  - iTouch
  - Image quality

- CEUSPos
- FOV:

\*The DC-80 is designed for compatibility with commercially available ultrasound contrast agents. Because the availability of these agents is subject to government regulation and approval, product features intended for use with these agents may not be commercially marketed nor made available before the contrast agent is cleared for use. Contrast related product features are enabled only on systems for delivery to an authorized country or region of use. Mindray medical systems makes no claims concerning the safety or effectiveness of contrast agents.

#### 4.24 Contrast Imaging QA

- Support Time-Intensity Curve analysis
- Table display
- Freehand ROI, Ellipse ROI
- Up to 8 ROIs
- Delete all
- Delete current
- Fit curve
- Raw curve
- Motion tracking
- X scale
- Export

#### 4.25 LVO (option)

- Only available on SP5-1E
- Dedicated left ventricle contrast imaging tool

#### 4.26 STE Imaging (Sound Touch Elastography Imaging)

- Available on L12-3E, L9-3E, L14-5WE, C5-1E, SC6-1E, and SC5-1E probes
- Real-time capture mode, high quality elasto imaging mode (HQElasto) and high frame Elasto imaging mode (HFElasto)
- Display Format
- HQElasto
- HFElasto
- Scale
- Opacity
- Map

- RLB Map
- RLB View
- iLayering
- Filter
- Measurement
- Elas. Metric
- E Quality
- ROI
- Map position
- Smooth
- Persistence
- M-STB index
- M-STB Sensi.
- E Bar
- iNature
- E Avg
- Fixed ROI
- Save all
- Lesion

#### 4.27 STQ Imaging (Sound Touch Quantification Imaging)

- Available on L12-3E, L9-3E, L14-5WE, C5-1E, SC6-1E, and SC5-1E probes
- Real-time capture mode, high quality elasto imaging mode (HQElasto) and high frame Elasto imaging mode (HFElasto)
- ROI Adjustment
- HQElasto
- HFElasto
- Scale
- E Avg
- E bar
- Map position
- Smooth
- Persistence
- Filter
- Elasto Curve and Elas. Metric: E (unit: kPa), Cs (unit: m/s; Cs is not available in every region), G.
- M-STB index
- M-STB Sensi.
- Save all
- Lesion

The square height of the elasto curve represents the average value of the elasto metric for current frame.

#### 4.28 Natural Touch Elastography

- Available on L12-3E, L9-3E, L14-5WE, L14-6NE, and L14-6WE in small part exam mode;  
Available on L20-5E in musculo-skeletal exam mode;  
V11-3HE, DE11-3E, V11-3E, and V11-3BE in gynecology and prostate exam modes
  - Support strain, strain ratio and strain histogram measurement
  - Unique shell analysis function
  - Stress compensation technology reduces deeper tissue artifacts, obtain more uniform stress throughout whole field
  - Stress indicator: supports frame by frame stress indication.
  - Map
  - Opacity
  - ROI Width/ height: continuously adjustable
  - Invert
  - Display Format
  - Smooth
  - Strain scale
  - Map position
- 4.29 Fusion Imaging
- Available on C5-1E, SC5-1E, SP5-1E and L14-5WE in B/ Color/ Power/ Contrast imaging mode (non-cardiac contrast mode)
  - Single window display
  - Fusing CT/MR body data with the ultrasonic image
  - CT/MR data reconstruction for 3D displaying
  - Tracking system: on/off
  - Fusion ratio
  - Axis rotatio
  - ROI Offset X
  - ROI Offset Y
  - Window W/L
  - Reset Window W/L
  - Reset CT/MR
  - Display marks
  - Respiration curve
  - Respiration Range
  - Support general measurement
  - Support adding comment and
- bodymark
- 4.30 AutoEF
- Output EDV/ ESV/ EF/ SV/ CO by Simpson method
  - Activated with or without ECG
  - Adjustment for the border of endocardium by single point or multi points
  - Adjust Frame
  - Layout: Dual/ Single
  - Diastole FR
  - Systole FR
  - Volume curve: on/off
- 4.31 TDI QA
- Dedicated quantification tool for TDI velocity, strain, strain rate analysis
  - Ellipse ROI, Standard ROI
  - Up to 8 of ROI
  - Delete all
  - Delete current
  - ROI tracking: tracking ROI along with cardiac movement
  - Std. Height
  - Std. Width
  - Std. Angle
  - Export
- 4.32 TT QA
- Available on P4-2NE/ P7-3E/ P10-4E/ SP5-1E
  - Tissue tracking quantitative analysis
  - Mandatory ECG connection before TT QA cine acquisition
  - Six views for analysis
  - Reload
  - Edit
  - Start tracking
  - Accept & compute
  - Display effect
  - Trace method
  - Bull's eye
  - LGC
  - Valve's open and close time index
  - Data export
  - Cycle
  - Auto play
  - Thickness
  - Track point
  - Parameter

- Smooth
- 4.33 Stress Echo
- Available on the phased probes in cardiac mode
  - 14 factory protocols
  - User-defined protocols
  - Customized stages
  - View
  - Image acquisition
    - Capture in systolic cycle, capture in full cardiac cycle
    - Acquire mode:
    - Ability to acquire frames or clips in B-mode
  - Image selection
    - Attach the images with view annotation label (PSLA, PSAX, A4C, A2C, and customized views)
  - Review
    - Automatically adjust to the number of images user defined
  - Wall Motion Scoring
    - ASE 16 (with score 4-7), or ASE 17 (with score 4-7)
    - Graphical display of scoring (Normal, Hyperkinetic, Severely Hyperkinetic, Akinetic, Dyskinetic)
  - Report
- 4.34 Smart Pelvic Floor
- Enter smart pelvic in 2D or 3D/4D scanning mode.
  - Set Rest and Valsalva frame
  - Measure automatically

## 5 Cine Review and Raw Data

### Processing

- 5.1 Cine review
- Available in all modes
  - Frame by frame manual cine loop review or auto playback with variable speed
  - Maximum cine memory up to 41158 frames or 150M (depends on the mode)
  - Maximum 4D cine memory: 89113 volumes
  - Retrospective storage (1-120s, pre-settable) and prospective storage

(1-480s, pre-settable)

- Frame compare: displays one cine in dual format and allows frame by frame compare side by side
- Cine compare: compare cines which are saved in same imaging mode
- Jump to first and jump to last: one key stroke go to first or last frame in the cine

### 5.2 Raw data processing

- B-mode:
  - iClear™
  - Zoom
  - TGC
  - LGC
  - Gain
  - Dynamic range
  - Gray map
  - Tint map
  - Flip
  - Rotation
- M-mode:
  - Speed
  - Dynamic range,
  - Gain
  - Gray map,
  - Tint map,
  - Edge enhancement
- Color:
  - Gain
  - Invert
  - Smooth
  - Baseline
  - Color map
  - Priority
  - Velocity tag
- PW:
  - Baseline
  - Wall filter
  - Speed
  - Angle correction
  - Quick angle
  - Invert
  - Dynamic range
  - Gray map
  - Tint map

## 6 Measurement/Analysis and Report\*

### 6.1 Generic measurements

- B-Mode
- Distance
- Ellipse
- Trace
- Spline
- Cross
- Angle(2L)
- Angle(3P)
- Double Dist
- Trace Len
- Trace Len(Spline)
- Parallel
- Distance P-L
- IMT
- B-Profile
- B-Hist(Ellipse)
- B-Hist(Trace)
- B-Hist(Spline)
- B-Hist(Rectangle)
- Depth
- Color Vel
- Strain Hist
- Elas. Hist
- Color Vel Profile
- Elas.
- Strain
- -----
- Volume
- Volume(Ellipse)
- Volume(E+Dist.)
- Ratio(D)
- -----
- Volume
- Volume
- Volume(Ellipse)
- Volume(E+Dist.)
- Ratio(A)
- Area1
- Area2
- Directional Ratio
- D1
- D2
- RAC
- Sag
- XS
- Volume Flow
- Vas Area
- TAMEAN
- TAMAX

- Elas. Ratio
- A
- B
- Strain Ratio
- A
- B
- 
- M-Mode
- HR
- HR(R-R)
- Slope
- Distance
- Time
- Velocity
- 
- D-Mode
- PS/ED
- Vel
- HR
- HR(R-R)
- Time
- Acceleration
- D Trace
- -----
- Ratio(Vel)
- Ratio(VTI)
- -----
- Volume Flow
- Vas Area
- TAMEAN
- TAMAX
- 6.2 AutoCalc
- PS
- ED
- MD
- PPG
- TAMAX
- Vol Flow(TAMAX)
- TAMEAN
- Vol Flow(TAMEAN)
- DT
- MPG
- MMPG
- VTI
- AT
- S/D
- D/S
- PI
- RI

- PV
- HR

### 6.3 Clinical option measurement package

- Abdominal

- B-Mode
- Liver
- Renal L
- Renal H
- Renal W
- Cortex
- Adrenal L
- Adrenal H
- Adrenal W
- CBD
- Portal V Diam
- CHD
- GB L
- GB H
- GB wall th
- Panc duct
- Panc head
- Panc body
- Panc tail
- Spleen L
- Spleen H
- Spleen W
- Spleen Area
- Splenic A Diam
- Splenic V Diam
- Aorta Diam H
- Aorta Diam W
- Aorta Bif
- Aorta Aneurysm L
- Aorta Aneurysm W
- Aorta Aneurysm H
- Iliac Diam
- Pre-BL L
- Pre-BL H
- Pre-BL W
- Post-BL L
- Post-BL H
- Post-BL W
- Ureter
- Hepatic Lesion1 d1
- Hepatic Lesion1 d2
- Hepatic Lesion1 d3
- Hepatic Lesion2 d1
- Hepatic Lesion2 d2

- Hepatic Lesion2 d3
- Hepatic Lesion3 d1
- Hepatic Lesion3 d2
- Hepatic Lesion3 d3
- Skin-L.Capsule Dist.
- Hepatic Cyst1 d1
- Hepatic Cyst1 d2
- Hepatic Cyst1 d3
- Hepatic Cyst2 d1
- Hepatic Cyst2 d2
- Hepatic Cyst2 d3
- Hepatic Cyst3 d1
- Hepatic Cyst3 d2
- Hepatic Cyst3 d3
- Renal Cyst1 d1
- Renal Cyst1 d2
- Renal Cyst1 d3
- Renal Cyst2 d1
- Renal Cyst2 d2
- Renal Cyst2 d3
- Renal Cyst3 d1
- Renal Cyst3 d2
- Renal Cyst3 d3
- Renal Lesion1 d1
- Renal Lesion1 d2
- Renal Lesion1 d3
- Renal Lesion2 d1
- Renal Lesion2 d2
- Renal Lesion2 d3
- Renal Lesion3 d1
- Renal Lesion3 d2
- Renal Lesion3 d3
- Hepatic Lesion1 Elas.
- Hepatic Lesion2 Elas.
- Hepatic Lesion3 Elas.
- LSM
- -----
- Aorta Sten D
- Aorta Sten A
- Renal Vol
- Pre-BL Vol
- Post-BL Vol
- Mictur.Vol
- -----
- Spleen
- Spleen L
- Spleen H
- Spleen W
- Spleen Area

- Aorta Aneurysm
- Aorta Aneurysm L
- Aorta Aneurysm W
- Aorta Aneurysm H
- Hepatic Lesion1
- Hepatic Lesion1 d1
- Hepatic Lesion1 d2
- Hepatic Lesion1 d3
- Hepatic Lesion2
- Hepatic Lesion2 d1
- Hepatic Lesion2 d2
- Hepatic Lesion2 d3
- Hepatic Lesion3
- Hepatic Lesion3 d1
- Hepatic Lesion3 d2
- Hepatic Lesion3 d3
- Hepatic Cyst1
- Hepatic Cyst1 d1
- Hepatic Cyst1 d2
- Hepatic Cyst1 d3
- Hepatic Cyst2
- Hepatic Cyst2 d1
- Hepatic Cyst2 d2
- Hepatic Cyst2 d3
- Hepatic Cyst3
- Hepatic Cyst3 d1
- Hepatic Cyst3 d2
- Hepatic Cyst3 d3
- Kidney
- Renal L
- Renal H
- Renal W
- Cortex
- Renal Cyst1
- Renal Cyst1 d1
- Renal Cyst1 d2
- Renal Cyst1 d3
- Renal Cyst2
- Renal Cyst2 d1
- Renal Cyst2 d2
- Renal Cyst2 d3
- Renal Cyst3
- Renal Cyst3 d1
- Renal Cyst3 d2
- Renal Cyst3 d3
- Renal Lesion1
- Renal Lesion1 d1
- Renal Lesion1 d2
- Renal Lesion1 d3
- Renal Lesion2
- Renal Lesion2 d1
- Renal Lesion2 d2
- Renal Lesion2 d3
- Renal Lesion3
- Renal Lesion3 d1
- Renal Lesion3 d2
- Renal Lesion3 d3
- Adrenal
- Adrenal L
- Adrenal H
- Adrenal W
- Bladder
- Pre-BL L
- Pre-BL H
- Pre-BL W
- Post-BL L
- Post-BL H
- Post-BL W
- Hepatic Lesion1 ElasRatio
- A
- B
- Hepatic Lesion2 ElasRatio
- A
- B
- Hepatic Lesion3 ElasRatio
- A
- B
- M-Mode
- D-Mode
- Ren A Org
- Arcuate A
- Segment A
- Interlobar A
- Renal A
- M Renal A
- Renal V
- Aorta
- Celiac Axis
- SMA
- IMA
- C Hepatic A
- Hepatic A
- Splenic A
- IVC
- IVC Reflux
- Portal V

- M Portal V
- Hepatic V
- Lt Hepatic V
- Rt Hepatic V
- M Hepatic V
- Splenic V
- SMV
- IMV
- -----
- RAR
- SMA/Ao
- CA/Ao
- Gynecology
  - B-Mode
  - UT L
  - UT H
  - UT W
  - Cervix L
  - Cervix H
  - Cervix W
  - Endo
  - Ovary L
  - Ovary H
  - Ovary W
  - Follicle1 d1
  - Follicle1 d2
  - Follicle1 d3
  - Follicle2 d1
  - Follicle2 d2
  - Follicle2 d3
  - Follicle3 d1
  - Follicle3 d2
  - Follicle3 d3
  - Follicle4 d1
  - Follicle4 d2
  - Follicle4 d3
  - Follicle5 d1
  - Follicle5 d2
  - Follicle5 d3
  - Follicle6 d1
  - Follicle6 d2
  - Follicle6 d3
  - Follicle7 d1
  - Follicle7 d2
  - Follicle7 d3
  - Follicle8 d1
  - Follicle8 d2
  - Follicle8 d3
  - Follicle9 d1
  - Follicle9 d2
  - Follicle9 d3
  - Follicle10 d1
  - Follicle10 d2
  - Follicle10 d3
  - Follicle11 d1
  - Follicle11 d2
  - Follicle11 d3
  - Follicle12 d1
  - Follicle12 d2
  - Follicle12 d3
  - Follicle13 d1
  - Follicle13 d2
  - Follicle13 d3
  - Follicle14 d1
  - Follicle14 d2
  - Follicle14 d3
  - Follicle15 d1
  - Follicle15 d2
  - Follicle15 d3
  - Follicle16 d1
  - Follicle16 d2
  - Follicle16 d3
  - Fibroid1 d1
  - Fibroid1 d2
  - Fibroid1 d3
  - Fibroid2 d1
  - Fibroid2 d2
  - Fibroid2 d3
  - Fibroid3 d1
  - Fibroid3 d2
  - Fibroid3 d3
  - GYN Lesion1 d1
  - GYN Lesion1 d2
  - GYN Lesion1 d3
  - GYN Lesion2 d1
  - GYN Lesion2 d2
  - GYN Lesion2 d3
  - GYN Lesion3 d1
  - GYN Lesion3 d2
  - GYN Lesion3 d3
  - Ovarian Cyst1 d1
  - Ovarian Cyst1 d2
  - Ovarian Cyst1 d3
  - Ovarian Cyst2 d1
  - Ovarian Cyst2 d2
  - Ovarian Cyst2 d3
  - Ovarian Cyst3 d1
  - Ovarian Cyst3 d2



- Ovarian Cyst3 d3	- UT Vol
- DWT	- UT SUM
- BSD(R)	- UT-L/CX-L
- BSD(Va)	- Follicle1
- RVA(R)	- Follicle2
- RVA(Va)	- Follicle3
- UTA(R)	- Follicle4
- UTA(Va)	- Follicle5
- URA	- Follicle6
- PVA(R)	- Follicle7
- PVA(Va)	- Follicle8
- PUA(R)	- Follicle9
- PUA(Va)	- Follicle10
- BPW-SP Dist.(R)	- Follicle11
- BPW-SP Dist.(Va)	- Follicle12
- Cx-SP Dist.(R)	- Follicle13
- Cx-SP Dist.(Va)	- Follicle14
- RA-SP Dist.(R)	- Follicle15
- RA-SP Dist.(Va)	- Follicle16
- Shuttle(R)	- Mean DWT
- Shuttle(Va)	- BND
- Rectocele Depth	- IAS Damage
- Intus. Depth	- EAS Damage
- ARA(R)	- -----
- ARA(Va)	- Uterus
- ARA(C)	- UT L
- LH AP Diam(R)	- UT H
- LH AP Diam(Va)	- UT W
- LH AP Diam(C)	- Endo
- LH Lateral Diam(R)	- Uterine Cervix
- LH Lateral Diam(Va)	- Cervix L
- LH Lateral Diam(C)	- Cervix H
- LH Area(R)	- Cervix W
- LH Area(Va)	- Ovary
- LH Area(C)	- Ovary L
- LA Angle(R)	- Ovary H
- LA Angle(Va)	- Ovary W
- LA Angle(C)	- Follicle1
- LA Thickness(R)	- Follicle1 d1
- LA Thickness(Va)	- Follicle1 d2
- LA Thickness(C)	- Follicle1 d3
- LUG(R)	- Follicle2
- LUG(Va)	- Follicle2 d1
- LUG(C)	- Follicle2 d2
- GYN Lesion1 Strain	- Follicle2 d3
- GYN Lesion2 Strain	- Follicle3
- GYN Lesion3 Strain	- Follicle3 d1
- -----	- Follicle3 d2
- Ovary Vol	- Follicle3 d3

- Follicle4
- Follicle4 d1
- Follicle4 d2
- Follicle4 d3
- Follicle5
- Follicle5 d1
- Follicle5 d2
- Follicle5 d3
- Follicle6
- Follicle6 d1
- Follicle6 d2
- Follicle6 d3
- Follicle7
- Follicle7 d1
- Follicle7 d2
- Follicle7 d3
- Follicle8
- Follicle8 d1
- Follicle8 d2
- Follicle8 d3
- Follicle9
- Follicle9 d1
- Follicle9 d2
- Follicle9 d3
- Follicle10
- Follicle10 d1
- Follicle10 d2
- Follicle10 d3
- Follicle11
- Follicle11 d1
- Follicle11 d2
- Follicle11 d3
- Follicle12
- Follicle12 d1
- Follicle12 d2
- Follicle12 d3
- Follicle13
- Follicle13 d1
- Follicle13 d2
- Follicle13 d3
- Follicle14
- Follicle14 d1
- Follicle14 d2
- Follicle14 d3
- Follicle15
- Follicle15 d1
- Follicle15 d2
- Follicle15 d3
- Follicle16
- Follicle16 d1
- Follicle16 d2
- Follicle16 d3
- Fibroid1
- Fibroid1 d1
- Fibroid1 d2
- Fibroid1 d3
- Fibroid2
- Fibroid2 d1
- Fibroid2 d2
- Fibroid2 d3
- Fibroid3
- Fibroid3 d1
- Fibroid3 d2
- Fibroid3 d3
- GYN Lesion1
- GYN Lesion1 d1
- GYN Lesion1 d2
- GYN Lesion1 d3
- GYN Lesion2
- GYN Lesion2 d1
- GYN Lesion2 d2
- GYN Lesion2 d3
- GYN Lesion3
- GYN Lesion3 d1
- GYN Lesion3 d2
- GYN Lesion3 d3
- Ovarian Cyst1
- Ovarian Cyst1 d1
- Ovarian Cyst1 d2
- Ovarian Cyst1 d3
- Ovarian Cyst2
- Ovarian Cyst2 d1
- Ovarian Cyst2 d2
- Ovarian Cyst2 d3
- Ovarian Cyst3
- Ovarian Cyst3 d1
- Ovarian Cyst3 d2
- Ovarian Cyst3 d3
- Residual Urine
- BL Height
- BL Depth
- GYN Lesion1 Strain Ratio
- A
- B
- GYN Lesion2 Strain Ratio
- A
- B
- GYN Lesion3 Strain Ratio

- A
- B
- 
- M-Mode
- 
- D-Mode
- Obstetrics
  - B-Mode
  - GS
  - YS
  - CRL
  - NT
  - BPD
  - OFD
  - HC
  - AC
  - FL
  - TAD
  - APAD
  - TCD
  - CM
  - IT
  - LVW
  - HW
  - OOD
  - IOD
  - HUM
  - Ulna
  - RAD
  - Tibia
  - FIB
  - CLAV
  - Vertebrae
  - MP
  - Foot
  - NBL
  - Ear
  - APTD
  - TTD
  - FTA
  - THD
  - HrtC
  - TC
  - Umb VD
  - F-kidney
  - Mat Kidney
  - Cervix L
  - AF
  - NF
- Orbit
- PL Thickness
- Sac Diam1
- Sac Diam2
- Sac Diam3
- AF1
- AF2
- AF3
- AF4
- LVIDd
- LVIDs
- LV Diam
- LA Diam
- RVIDd
- RVIDs
- RV Diam
- RA Diam
- IVSd
- IVSs
- IVS
- LV Area
- LA Area
- RV Area
- RA Area
- Ao Diam
- MPA Diam
- LVOT Diam
- RVOT Diam
- Facial Angle
- HrtA
- MV Diam(Z-Score)
- PV Diam(Z-Score)
- Ao Asc Diam(Z-Score)
- Ao Desc Diam(Z-Score)
- Duct Art Diam(Z-Score)
- TV Diam(Z-Score)
- LPA Diam(Z-Score)
- RPA Diam(Z-Score)
- IVC Diam(Z-Score)
- AV Diam(Z-Score)
- MPA Diam(Z-Score)
- RV Diam(Z-Score)
- LV Diam(Z-Score)
- RV Area(Z-Score)
- LV Area(Z-Score)
- RVIDd(Z-Score)
- LVIDd(Z-Score)
- UT L
- UT H

- UT W
- Endo
- -----
- MAD
- Mean Sac Diam
- AFI
- EFW
- EFW2
- HC/AC(Campbell)
- FL/AC
- FL/BPD
- AXT
- CI
- FL/HC(Hadlock)
- AC(c)
- HC(c)
- HrtC/TC
- TCD/AC
- LVW/HW
- LVD/RVD
- LAD/RAD
- AoD/MPAD
- LAD/AoD
- UT Vol
- UT SUM
- UT-L/CX-L
- -----
- AFI
- AF1
- AF2
- AF3
- AF4
- Uterus
- UT L
- UT H
- UT W
- Endo
- 
- M-Mode
- FHR (M)
- LVIDd
- LVIDs
- RVIDd
- RVIDs
- IVSd
- IVSs
- RVIDd(Z-Score)
- LVIDd(Z-Score)
- 

- D-Mode
- Umb A
- Duct Veno
- Placenta A
- MCA
- Fetal Ao
- Desc Aorta
- Ut A
- Ovarian A
- FHR (Doppler)
- Asc Aorta
- RVOT
- LVOT
- Cardiology
- B-Mode
- RVAWd(2D)
- RVAWs(2D)
- RVDd(2D)
- RVDs(2D)
- IVSd(2D)
- IVSs(2D)
- LVIDd(2D)
- LVIDs(2D)
- LVPWd(2D)
- LVPWs(2D)
- Diastole(2D)
- Systole(2D)
- LVLd apical
- LVLs apical
- LVAd apical
- LVAs apical
- LVAd sax MV
- LVAs sax MV
- LVAd sax Endo
- LVAd sax Epi
- LV Major
- LV Minor
- LV Area(d)
- LV Area(s)
- HR(2D)
- RA Major
- RA Minor
- RA Area
- RA Vol(A4C)
- RAP
- RV Area(d)
- RV Area(s)
- RV Major
- RV Minor

- LA Diam(2D)	- LVIDd(2D)
- LA Major	- LVPWd(2D)
- LA Minor	- IVSs(2D)
- LA Area	- LVIDs(2D)
- LVOT Diam	- LVPWs(2D)
- Ao Diam(2D)	- HR(2D)
- ACS(2D)	- Simpson
- AV Diam	- A2Cd
- Ao Isthmus(2D)	- A2Cs
- Ao Sinus Diam(2D)	- A4Cd
- Ao st junct(2D)	- A4Cs
- AVA	- HR(2D)
- Ao Arch Diam(2D)	- Mod.Simpson
- Ao Asc Diam(2D)	- LVLd apical
- Ao Desc Diam(2D)	- LVLs apical
- Duct Art Diam	- LVAd sax MV
- Post Ductal	- LVAs sax MV
- Pre Ductal	- LVAd sax PM
- MCS(2D)	- LVAs sax PM
- MV Diam	- HR(2D)
- MV EPSS(2D)	- S-P Ellipse
- MVA	- LVLd apical
- TV Diam	- LVAd apical
- TVA	- LVLs apical
- PV Diam	- LVAs apical
- RVOT Diam	- HR(2D)
- MPA Diam(2D)	- B-P Ellipse
- RPA Diam(2D)	- LVIDd(2D)
- LPA Diam(2D)	- LVAd sax MV
- IVC Diam(Expir)	- LVIDs(2D)
- IVC Diam(Insp)	- LVAs sax MV
- SVC Diam(Expir)	- LVAd apical
- SVC Diam(Insp)	- LVAs apical
- LCA Diam	- HR(2D)
- RCA Diam	- Bullet
- PEd(2D)	- LVLd apical
- PEs(2D)	- LVLs apical
- VSD Diam	- LVAd sax MV
- ASD Diam	- LVAs sax MV
- PDA Diam	- HR(2D)
- PFO Diam	- LV Mass(Cube-2D)
- AutoEF	- IVSd(2D)
- -----	- LVIDd(2D)
- LA/Ao(2D)	- LVPWd(2D)
- -----	- LV Mass(A-L)
- LV(2D)	- LVLd apical
- Diastole(2D)	- LVAd sax Epi
- Systole(2D)	- LVAd sax Endo
- IVSd(2D)	- LV Mass(T-E)

-	LVAd sax Epi	-	PR Als Vel
-	LVAd sax Endo	-	PR VTI
-	a	-	Qp/Qs
-	d	-	LVOT Diam
-	LA Vol(Simp)	-	LVOT VTI
-	LA Vol(A2C)	-	RVOT Diam
-	LA Vol(A4C)	-	RVOT VTI
-	LA Vol(A-L)	-	Z-Scores (3Y) (2D)
-	LA apical	-	AV Diam
-	LAA(A2C)	-	Ao Sinus Diam
-	LAA(A4C)	-	Ao st junct
-	MVA(VTI)	-	PV Diam
-	LVOT Diam	-	Ao Arch IA-LCA
-	LVOT VTI	-	Ao Arch LCA-LSA
-	MV VTI	-	Ao Arch after LSA
-	AVA(VTI)	-	Ao Isthmus
-	LVOT Diam	-	Thoracic Ao Diam
-	LVOT VTI	-	IVC Diam
-	AV VTI	-	MV Diam
-	CO(LVOT)	-	TV Diam
-	LVOT Diam	-	MPA Diam
-	LVOT VTI	-	RPA Diam
-	AV HR	-	LPA Diam
-	CO(RVOT)	-	Z-Scores (<18Y) (2D)
-	RVOT Diam	-	LV Area(d) A4C
-	RVOT VTI	-	LV Area(s) A4C
-	PV HR	-	LVIDd A4C(2D)
-	CO(MV)	-	LVIDs A4C(2D)
-	MV Diam	-	LA AP Diam A4C
-	MV VTI	-	LA LL Diam A4C
-	MV HR	-	LA Area A4C
-	CO(TV)	-	RA AP Diam A4C
-	TV Diam	-	RA LL Diam A4C
-	TV VTI	-	RA Area A4C
-	TV HR	-	RV Area(d) A4C
-	PISA MR	-	RV Area(s) A4C
-	MR Rad	-	RVd Major A4C
-	MR Als Vel	-	RVs Major A4C
-	MR VTI	-	RVd Minor (basal) A4C
-	PISA AR	-	RVd Minor (midcavity) A4C
-	AR Rad	-	LV Area(d) A2C
-	AR Als Vel	-	LV Area(s) A2C
-	AR VTI	-	LVIDd A2C(2D)
-	PISA TR	-	LVIDs A2C(2D)
-	TR Rad	-	
-	TR Als Vel	-	M-Mode
-	TR VTI	-	RVAWd(M)
-	PISA PR	-	RVAWs(M)
-	PR Rad	-	RVDd(M)

- RVDs(M)
- Ao Arch Diam(M)
- Ao Asc Diam(M)
- Ao Desc Diam(M)
- Ao Diam(M)
- Ao Isthmus(M)
- Ao Sinus Diam(M)
- Ao st junct(M)
- ACS(M)
- HR(M)
- IVSd(M)
- IVSs(M)
- LA Diam(M)
- LPA Diam(M)
- Diastole(M)
- Systole(M)
- LVET(M)
- LVIDd(M)
- LVIDs(M)
- LVOT Diam
- LVPEP(M)
- LVPWd(M)
- LVPWs(M)
- MCS(M)
- MPA Diam(M)
- MV A Amp
- MV E Amp
- MV D-E Slope
- MV D-E Amp
- MV E-F Slope
- MV EPSS(M)
- PEd(M)
- PEs(M)
- RPA Diam(M)
- RVET(M)
- RVOT Diam
- RVPEP(M)
- MAPSE
- TAPSE
- MV ALL
- -----
- LA/Ao(M)
- -----
- LV(M)
  - Diastole(M)
  - Systole(M)
  - IVSd(M)
  - LVIDd(M)
  - LVPWd(M)
- IVSs(M)
- LVIDs(M)
- LVPWs(M)
- HR(M)
- LV Mass(Cube-M)
- IVSd(M)
- LVIDd(M)
- LVPWd(M)
- LV Tei Index(M)
- MV C-O dur(M)
- LVET(M)
- Z-Scores (3Y) (M)
- IVSd(M)
- LVPWd(M)
- Z-Scores (<18Y) (M)
- LVIDd(M)
- LVIDs(M)
- 
- D-Mode
- MV Aa(lateral)
- MV Aa(medial)
- AAO Vmax
- AV VTI
- AV HR
- AV Vmax
- AR DecT
- AR PHT
- AR Ved
- AR Vmax
- AR VTI
- MV ARa(lateral)
- MV ARa(medial)
- ASD Vmax
- AV AccT
- AV DecT
- Coarc Post-Duct
- Coarc Pre-Duct
- DAo Vmax
- MV DRa(lateral)
- MV DRa(medial)
- MV Ea(lateral)
- MV Ea(medial)
- IVC Vel(Expir)
- IVC Vel(Insp)
- IVCT
- LPA Vmax
- LVET(Doppler)
- LVOT AccT
- LVOT VTI

- LVOT Vmax
- LVPEP(Doppler)
- MPA Vmax
- dP/dt
- Tau(BAI)
- MR VTI
- MR Vmax
- MS Vmax
- MV A Dur
- MV A Vel
- MV A VTI
- MV AccT
- MV DecT
- MV E Dur
- MV E Vel
- MV E VTI
- IVRT
- MV VTI
- MV HR
- MV Vmax
- PVein A Dur
- PVein A Vel
- PVein D Vel
- PVein D VTI
- PVein DecT
- PVein S Vel
- PVein S VTI
- PDA Vel(d)
- PDA Vel(s)
- PR PHT
- PR VTI
- PR Ved
- PR Vmax
- PV AccT
- PV VTI
- PV HR
- PV Vmax
- RAP
- RPA Vmax
- RVET(Doppler)
- RVOT Vmax
- RVOT VTI
- RVPEP(Doppler)
- MV Sa(lateral)
- MV Sa(medial)
- SVC Vel(Expir)
- SVC Vel(Insp)
- TR VTI
- TR Vmax
- TV A Dur
- TV A Vel
- TV AccT
- TV DecT
- TV E Vel
- TV VTI
- TV HR
- TV Vmax
- VSD Vmax
- Hepatic V S Vel
- Hepatic V D Vel
- -----
- MV E/A
- MVA(PHT)
- TV E/A
- TVA(PHT)
- -----
- LV Tei Index(Doppler)
- MV C-O dur(Doppler)
- LVET(Doppler)
- RVSP
- TR Vmax
- RAP
- PAEDP
- PR Ved
- RAP
- MVA(VTI)
- LVOT Diam
- LVOT VTI
- MV VTI
- AVA(VTI)
- LVOT Diam
- LVOT VTI
- AV VTI
- CO(LVOT)
- LVOT Diam
- LVOT VTI
- AV HR
- CO(RVOT)
- RVOT Diam
- RVOT VTI
- PV HR
- CO(MV)
- MV Diam
- MV VTI
- MV HR
- CO(TV)
- TV Diam
- TV VTI



- TV HR
- RV Tei Index
- TV C-O dur
- RVET(Doppler)
- PISA MR
- MR Rad
- MR Als Vel
- MR VTI
- PISA AR
- AR Rad
- AR Als Vel
- AR VTI
- PISA TR
- TR Rad
- TR Als Vel
- TR VTI
- PISA PR
- PR Rad
- PR Als Vel
- PR VTI
- Qp/Qs
- LVOT Diam
- LVOT VTI
- RVOT Diam
- RVOT VTI

• Urology

- B-Mode
- Renal L
- Renal H
- Renal W
- Cortex
- Adrenal L
- Adrenal H
- Adrenal W
- Prostate L
- Prostate H
- Prostate W
- Seminal L
- Seminal H
- Seminal W
- Testicular L
- Testicular H
- Testicular W
- Ureter
- Pre-BL L
- Pre-BL H
- Pre-BL W
- Post-BL L
- Post-BL H

- Post-BL W
- Renal Cyst1 d1
- Renal Cyst1 d2
- Renal Cyst1 d3
- Renal Cyst2 d1
- Renal Cyst2 d2
- Renal Cyst2 d3
- Renal Cyst3 d1
- Renal Cyst3 d2
- Renal Cyst3 d3
- Renal Lesion1 d1
- Renal Lesion1 d2
- Renal Lesion1 d3
- Renal Lesion2 d1
- Renal Lesion2 d2
- Renal Lesion2 d3
- Renal Lesion3 d1
- Renal Lesion3 d2
- Renal Lesion3 d3
- Prostate Mass1 d1
- Prostate Mass1 d2
- Prostate Mass1 d3
- Prostate Mass2 d1
- Prostate Mass2 d2
- Prostate Mass2 d3
- Prostate Mass3 d1
- Prostate Mass3 d2
- Prostate Mass3 d3
- Testicular Mass1 d1
- Testicular Mass1 d2
- Testicular Mass1 d3
- Testicular Mass2 d1
- Testicular Mass2 d2
- Testicular Mass2 d3
- Testicular Mass3 d1
- Testicular Mass3 d2
- Testicular Mass3 d3
- Epididymis L
- Epididymis H
- Epididymis W
- Scrotal Wall
- Prostate Mass1 Strain
- Prostate Mass2 Strain
- Prostate Mass3 Strain
- -----
- Renal Vol
- Prostate Vol
- Testicular Vol
- Pre-BL Vol

-	Post-BL Vol	-	Pre-BL L
-	Mictur.Vol	-	Pre-BL H
-	-----	-	Pre-BL W
-	Kidney	-	Post-BL L
-	Renal L	-	Post-BL H
-	Renal H	-	Post-BL W
-	Renal W	-	Prostate Mass1
-	Cortex	-	Prostate Mass1 d1
-	Adrenal	-	Prostate Mass1 d2
-	Adrenal L	-	Prostate Mass1 d3
-	Adrenal H	-	Prostate Mass2
-	Adrenal W	-	Prostate Mass2 d1
-	Renal Cyst1	-	Prostate Mass2 d2
-	Renal Cyst1 d1	-	Prostate Mass2 d3
-	Renal Cyst1 d2	-	Prostate Mass3
-	Renal Cyst1 d3	-	Prostate Mass3 d1
-	Renal Cyst2	-	Prostate Mass3 d2
-	Renal Cyst2 d1	-	Prostate Mass3 d3
-	Renal Cyst2 d2	-	Testicular Mass1
-	Renal Cyst2 d3	-	Testicular Mass1 d1
-	Renal Cyst3	-	Testicular Mass1 d2
-	Renal Cyst3 d1	-	Testicular Mass1 d3
-	Renal Cyst3 d2	-	Testicular Mass2
-	Renal Cyst3 d3	-	Testicular Mass2 d1
-	Renal Lesion1	-	Testicular Mass2 d2
-	Renal Lesion1 d1	-	Testicular Mass2 d3
-	Renal Lesion1 d2	-	Testicular Mass3
-	Renal Lesion1 d3	-	Testicular Mass3 d1
-	Renal Lesion2	-	Testicular Mass3 d2
-	Renal Lesion2 d1	-	Testicular Mass3 d3
-	Renal Lesion2 d2	-	Epididymis
-	Renal Lesion2 d3	-	Epididymis L
-	Renal Lesion3	-	Epididymis H
-	Renal Lesion3 d1	-	Epididymis W
-	Renal Lesion3 d2	-	Prostate Mass1 Strain Ratio
-	Renal Lesion3 d3	-	A
-	Prostate	-	B
-	Prostate L	-	Prostate Mass2 Strain Ratio
-	Prostate H	-	A
-	Prostate W	-	B
-	Seminal Vesicle	-	Prostate Mass3 Strain Ratio
-	Seminal L	-	A
-	Seminal H	-	B
-	Seminal W	-	
-	Testis	-	M-Mode
-	Testicular L	-	
-	Testicular H	-	D-Mode
-	Testicular W	-	Testicular A
-	Bladder	-	Testicular V

- Epididymis A
- Epididymis V
- Vascular
  - B-Mode
  - CCA IMT
  - Bulb IMT
  - ICA IMT
  - ECA IMT
  - Cephalic V
  - Basilic V
  - Axill. V
  - Brachial V
  - Ulnar V
  - Radial V
  - C.Iliac V
  - Ex.Iliac V
  - IIV
  - Femoral V
  - CFV
  - SFV
  - DFV
  - Pop V
  - TP Trunk V
  - Sural V
  - Soleal V
  - Peroneal V
  - A.Tib. V
  - P.Tib. V
  - Saph V
  - SSV
  - -----
  - Stenosis D
  - Stenosis A
  - -----
  - Stenosis A
    - A1
    - A2
  - IMT
    - CCA IMT
    - Bulb IMT
    - ICA IMT
    - ECA IMT
  - M-Mode
  - 
  - D-Mode
  - CCA
  - Bulb
  - ICA
- ECA
- Vert A
- Innom A
- Subclav A
- Axill A
- Brachial A
- Ulnar A
- Radial A
- Subclav V
- Axill V
- Cephalic V
- Basilic V
- Ulnar V
- Radial V
- C.Iliac A
- Ex.Iliac A
- IIA
- CFA
- SFA
- DFA
- Pop A
- TP Trunk A
- Peroneal A
- P.Tib A
- A.Tib A
- Dors.Ped A
- C.Iliac V
- C.Iliac V Reflux
- Ex.Iliac V
- Ex.Iliac V Reflux
- IIV
- IIV Reflux
- Femoral V
- Femoral V Reflux
- CFV
- CFV Reflux
- SFV
- SFV Reflux
- DFV
- DFV Reflux
- Saph V
- Saph V Reflux
- SSV
- SSV Reflux
- Pop V
- Pop V Reflux
- TP Trunk V
- TP Trunk V Reflux
- Sural V

- Sural V Reflux
- Soleal V
- Soleal V Reflux
- Peroneal V
- Peroneal V Reflux
- P.Tib V
- P.Tib V Reflux
- A.Tib V
- A.Tib V Reflux
- ACA
- MCA
- PCA
- AComA
- PComA
- BA
- Ba V
- Brachial V
- ASP
- BSP
- -----
- ICA/CCA
- -----
- ABI
- ASP
- BSP

• **Small Parts:**

- B-Mode
- Thyroid L
- Thyroid H
- Thyroid W
- Isthmus H
- Thyroid Mass1 d1
- Thyroid Mass1 d2
- Thyroid Mass1 d3
- Thyroid Mass2 d1
- Thyroid Mass2 d2
- Thyroid Mass2 d3
- Thyroid Mass3 d1
- Thyroid Mass3 d2
- Thyroid Mass3 d3
- Thyroid Nodule1 d1
- Thyroid Nodule1 d2
- Thyroid Nodule1 d3
- Thyroid Nodule2 d1
- Thyroid Nodule2 d2
- Thyroid Nodule2 d3
- Thyroid Nodule3 d1
- Thyroid Nodule3 d2
- Thyroid Nodule3 d3

- Thyroid Cyst1 d1
- Thyroid Cyst1 d2
- Thyroid Cyst1 d3
- Thyroid Cyst2 d1
- Thyroid Cyst2 d2
- Thyroid Cyst2 d3
- Thyroid Cyst3 d1
- Thyroid Cyst3 d2
- Thyroid Cyst3 d3
- Testicular L
- Testicular H
- Testicular W
- Epididymis L
- Epididymis H
- Epididymis W
- Scrotal Wall
- Testicular Mass1 d1
- Testicular Mass1 d2
- Testicular Mass1 d3
- Testicular Mass2 d1
- Testicular Mass2 d2
- Testicular Mass2 d3
- Testicular Mass3 d1
- Testicular Mass3 d2
- Testicular Mass3 d3
- Breast Mass1 L
- Breast Mass1 H
- Breast Mass1 W
- Nip.-Mass1 Dist.
- Skin-Mass1 Dist.
- Breast Mass2 L
- Breast Mass2 H
- Breast Mass2 W
- Nip.-Mass2 Dist.
- Skin-Mass2 Dist.
- Breast Mass3 L
- Breast Mass3 H
- Breast Mass3 W
- Nip.-Mass3 Dist.
- Skin-Mass3 Dist.
- Breast Mass4 L
- Breast Mass4 H
- Breast Mass4 W
- Nip.-Mass4 Dist.
- Skin-Mass4 Dist.
- Breast Mass5 L
- Breast Mass5 H
- Breast Mass5 W
- Nip.-Mass5 Dist.

- Skin-Mass5 Dist.
- Breast Mass6 L
- Breast Mass6 H
- Breast Mass6 W
- Nip.-Mass6 Dist.
- Skin-Mass6 Dist.
- Breast Mass7 L
- Breast Mass7 H
- Breast Mass7 W
- Nip.-Mass7 Dist.
- Skin-Mass7 Dist.
- Breast Mass8 L
- Breast Mass8 H
- Breast Mass8 W
- Nip.-Mass8 Dist.
- Skin-Mass8 Dist.
- Breast Mass9 L
- Breast Mass9 H
- Breast Mass9 W
- Nip.-Mass9 Dist.
- Skin-Mass9 Dist.
- Breast Mass10 L
- Breast Mass10 H
- Breast Mass10 W
- Nip.-Mass10 Dist.
- Skin-Mass10 Dist.
- THY Mass1 Strain
- THY Mass2 Strain
- THY Mass3 Strain
- THY Mass1 Elas.
- THY Mass2 Elas.
- THY Mass3 Elas.
- THY Nodule1 Strain
- THY Nodule2 Strain
- THY Nodule3 Strain
- THY Nodule1 Elas.
- THY Nodule2 Elas.
- THY Nodule3 Elas.
- Breast Mass1 Strain
- Breast Mass1 Elas.
- Breast Mass2 Strain
- Breast Mass2 Elas.
- Breast Mass3 Strain
- Breast Mass3 Elas.
- Breast Mass4 Strain
- Breast Mass4 Elas.
- Breast Mass5 Strain
- Breast Mass5 Elas.
- Breast Mass6 Strain
- Breast Mass6 Elas.
- Breast Mass7 Strain
- Breast Mass7 Elas.
- Breast Mass8 Strain
- Breast Mass8 Elas.
- Breast Mass9 Strain
- Breast Mass9 Elas.
- Breast Mass10 Strain
- Breast Mass10 Elas.
- -----
- Thyroid Vol
- Testicular Vol
- -----
- Thyroid
- Thyroid L
- Thyroid H
- Thyroid W
- Thyroid Mass1
- Thyroid Mass1 d1
- Thyroid Mass1 d2
- Thyroid Mass1 d3
- Thyroid Mass2
- Thyroid Mass2 d1
- Thyroid Mass2 d2
- Thyroid Mass2 d3
- Thyroid Mass3
- Thyroid Mass3 d1
- Thyroid Mass3 d2
- Thyroid Mass3 d3
- Thyroid Nodule1
- Thyroid Nodule1 d1
- Thyroid Nodule1 d2
- Thyroid Nodule1 d3
- Thyroid Nodule2
- Thyroid Nodule2 d1
- Thyroid Nodule2 d2
- Thyroid Nodule2 d3
- Thyroid Nodule3
- Thyroid Nodule3 d1
- Thyroid Nodule3 d2
- Thyroid Nodule3 d3
- Thyroid Cyst1
- Thyroid Cyst1 d1
- Thyroid Cyst1 d2
- Thyroid Cyst1 d3
- Thyroid Cyst2
- Thyroid Cyst2 d1
- Thyroid Cyst2 d2
- Thyroid Cyst2 d3

-	Thyroid Cyst3	-	Breast Mass5 L
-	Thyroid Cyst3 d1	-	Breast Mass5 H
-	Thyroid Cyst3 d2	-	Breast Mass5 W
-	Thyroid Cyst3 d3	-	Nip.-Mass5 Dist.
-	Testis	-	Skin-Mass5 Dist.
-	Testicular L	-	Breast Mass6
-	Testicular H	-	Breast Mass6 L
-	Testicular W	-	Breast Mass6 H
-	Testicular Mass1	-	Breast Mass6 W
-	Testicular Mass1 d1	-	Nip.-Mass6 Dist.
-	Testicular Mass1 d2	-	Skin-Mass6 Dist.
-	Testicular Mass1 d3	-	Breast Mass7
-	Testicular Mass2	-	Breast Mass7 L
-	Testicular Mass2 d1	-	Breast Mass7 H
-	Testicular Mass2 d2	-	Breast Mass7 W
-	Testicular Mass2 d3	-	Nip.-Mass7 Dist.
-	Testicular Mass3	-	Skin-Mass7 Dist.
-	Testicular Mass3 d1	-	Breast Mass8
-	Testicular Mass3 d2	-	Breast Mass8 L
-	Testicular Mass3 d3	-	Breast Mass8 H
-	Epididymis	-	Breast Mass8 W
-	Epididymis L	-	Nip.-Mass8 Dist.
-	Epididymis H	-	Skin-Mass8 Dist.
-	Epididymis W	-	Breast Mass9
-	Breast Mass1	-	Breast Mass9 L
-	Breast Mass1 L	-	Breast Mass9 H
-	Breast Mass1 H	-	Breast Mass9 W
-	Breast Mass1 W	-	Nip.-Mass9 Dist.
-	Nip.-Mass1 Dist.	-	Skin-Mass9 Dist.
-	Skin-Mass1 Dist.	-	Breast Mass10
-	Breast Mass2	-	Breast Mass10 L
-	Breast Mass2 L	-	Breast Mass10 H
-	Breast Mass2 H	-	Breast Mass10 W
-	Breast Mass2 W	-	Nip.-Mass10 Dist.
-	Nip.-Mass2 Dist.	-	Skin-Mass10 Dist.
-	Skin-Mass2 Dist.	-	THY Mass1 Strain Ratio
-	Breast Mass3	-	A
-	Breast Mass3 L	-	B
-	Breast Mass3 H	-	THY Mass2 Strain Ratio
-	Breast Mass3 W	-	A
-	Nip.-Mass3 Dist.	-	B
-	Skin-Mass3 Dist.	-	THY Mass3 Strain Ratio
-	Breast Mass4	-	A
-	Breast Mass4 L	-	B
-	Breast Mass4 H	-	THY Mass1 Elas. Ratio
-	Breast Mass4 W	-	A
-	Nip.-Mass4 Dist.	-	B
-	Skin-Mass4 Dist.	-	THY Mass2 Elas. Ratio
-	Breast Mass5	-	A

- B
- THY Mass3 Elas. Ratio
- A
- B
- THY Nodule1 Strain Ratio
- A
- B
- THY Nodule2 Strain Ratio
- A
- B
- THY Nodule3 Strain Ratio
- A
- B
- THY Nodule1 Elas. Ratio
- A
- B
- THY Nodule2 Elas. Ratio
- A
- B
- THY Nodule3 Elas. Ratio
- A
- B
- Breast Mass1 Strain Ratio
- A
- B
- Breast Mass1 Elas. Ratio
- A
- B
- Breast Mass2 Strain Ratio
- A
- B
- Breast Mass2 Elas. Ratio
- A
- B
- Breast Mass3 Strain Ratio
- A
- B
- Breast Mass3 Elas. Ratio
- A
- B
- Breast Mass4 Strain Ratio
- A
- B
- Breast Mass4 Elas. Ratio
- A
- B
- Breast Mass5 Strain Ratio
- A
- B
- Breast Mass5 Elas. Ratio
- A
- B
- Breast Mass6 Strain Ratio
- A
- B
- Breast Mass6 Elas. Ratio
- A
- B
- Breast Mass7 Strain Ratio
- A
- B
- Breast Mass7 Elas. Ratio
- A
- B
- Breast Mass8 Strain Ratio
- A
- B
- Breast Mass8 Elas. Ratio
- A
- B
- Breast Mass9 Strain Ratio
- A
- B
- Breast Mass9 Elas. Ratio
- A
- B
- Breast Mass10 Strain Ratio
- A
- B
- Breast Mass10 Elas. Ratio
- A
- B
- M-Mode
- D-Mode
- STA
- ITA
- Testicular A
- Testicular V
- Epididymis A
- Epididymis V
- Emergency:
  - B-Mode
  - Renal L
  - Renal H
  - Renal W

- CBD
- Portal V Diam
- CHD
- GB wall th
- Aorta Diam H
- Aorta Bif
- Ureter
- Pre-BL L
- Pre-BL H
- Pre-BL W
- Post-BL L
- Post-BL H
- Post-BL W
- GS
- YS
- CRL
- BPD
- UT L
- UT H
- UT W
- Endo
- Ovary L
- Ovary H
- Ovary W
- -----
- Renal Vol
- Pre-BL Vol
- Post-BL Vol
- Mictur.Vol
- Ovary Vol
- UT Vol
- UT SUM
- -----
- Uterus
- UT L
- UT H
- UT W
- Endo
- Ovary
- Ovary L
- Ovary H
- Ovary W
- Kidney
- Renal L
- Renal H
- Renal W
- Cortex
- Bladder
- Pre-BL L

- Pre-BL H
- Pre-BL W
- Post-BL L
- Post-BL H
- Post-BL W
- 
- M-Mode
- FHR (M)
- 
- D-Mode
- FHR (Doppler)
- Pediatrics:
  - B-Mode
  - HIP
  - HIP-Graf
  - HIP(  $\alpha$  )
  - HIP(  $\beta$  )
  - d/D
  - 
  - M-Mode
  - 
  - D-Mode
- 6.4 Report
  - Specific report template by application
  - Editable value in report
  - Images selectable
  - Able to preset the hospital information
  - Preview and printing reports
  - Able to Export as PDF/ RTF file
  - Editable anatomic map in report (V-Mapping)
- 6.5 IMT
  - Intima-Media Thickness Measurement
  - Automatic detection of IMT when ROI is set
  - Support CCA, ICA, ECA, Bulb IMT
  - Near wall and far wall detection
  - Angle selectable
- 6.6 IVF
  - The uterus and follicle growth curve can be displayed in the IVF report.
  - Data of IVF history exams can be checked in the IVF report.
- 6.7 Smart OB™
  - Auto measurement for OB, a special tool for easy OB scan, and greatly



reduce time and increase productivity

- Support BPD, HC, OFD, FL, AC, HUM
- Better get GA before start auto AC
- Measurement result can be modified by user

#### 6.8 Smart NT™

- NT auto measurement
- Auto detection of NT inside ROI

#### 6.9 iWorks™

- Auto workflow protocol
- Templates are user configurable
- Functions: pause, stop, replace, repeat, skip, insert single step, return and continue, steps in thumbnail, iNSert™ another template
- iWorks setup mode: B/ Dual/ B+Color/ B+PW/ B+Color+PW/ B+CW/ B+Color+CW/ B+M
- iWorks setup annotation: support up to 2 annotations, location and font size are configurable.
- iWorks setup bodymark: select existing library, and transducer indicator is pre-settable
- iWorks setup measurement: select existing measurement library
- Template import and export are available

\* Not all measurements are listed in this part; for more detailed information please refer to User Manual

## 7 Exam Storage and Management

### 7.1 Exam storage

- 1TB hard drive and 128G SSD
- Direct digital storage of single frame and cine 2D, color and Doppler.

### 7.2 Exam management

- iStation™ workstation dedicated for patient exam management
- Patient exam query/ retrieve
- Support review of current and past exam
- New exam, Active exam, Continue exam functions, End exam are available
- Support measurements and

calculations on archived exam and images

- Export images as BMP/ JPG/ TIFF/ DCM/ AVI format
- Support backup/ send to USB devices, DVD-RW media

## 8 Connectivity

### 8.1 Ethernet Network Connection

- Cable connection
- Wireless connection: built-in wireless adaptor

### 8.2 USB to serial data output (need a converter cable)

### 8.3 DICOM 3.0

- DICOM basic
  - Verify (SCU, SCP)
  - Print
  - Store
  - Storage Commitment
  - Media Exchange
- DICOM Worklist
- DICOM Query/ Retrieve (option)
- DICOM Modality Performed Procedure Step - MPPS (option)
- DICOM OB/ GYN structure report (option)
- DICOM Cardiac structure report (option)
- DICOM Vascular structure report (option)
- DICOM Abdomen structure report (option)
- DICOM Breast structure report (option)

### 8.4 MedSight

- An interactive app that lets you transfer clinical images straight from Mindray Ultrasound system to a smart device, such as mobile phone or tablet PC
- Needs to be installed on mobile terminal
- Transfer images or clips from system to mobile terminal through WiFi
- Support Android (4.0 and above system; iOS (8.0 and above)
  - DICOM is not necessary

### 8.5 MedTouch

- Connect Ultrasound machine to smart devices based on Android and iOS system, such as tablet PC or mobile phone. Remote control of Ultrasound machine, review of patient information, and tutorial software iScanHelper study on smart devices
- Support Android and iOS powered smart devices
  - Android 4.0 and above
  - iOS8.0 and above
  - DICOM is not necessary

## 9 Transducers

### 9.1 Curved array

- SC6-1E
  - Application: Obstetrics, Gynecology, Abdomen, Musculo-skeletal, Vascular, Urology, Nerve
  - Bandwidth: 1.3-5.7 MHz
  - Convex Radius: 60 mm
  - Physical Footprint: 65.1mm × 16.4 mm
  - Biopsy Guide: NGB-022, multi angle, reusable
- SC5-1NE
  - Application: Obstetrics, Gynecology, Abdomen, Musculo-skeletal, Vascular, Urology, Nerve
  - Bandwidth: 1.3-5.7 MHz
  - Convex Radius: 60 mm
  - Physical Footprint: 76.7mm × 28 mm
  - Biopsy Guide: NGB-022, multi angle, reusable
- SC5-1E
  - Application: Obstetrics, Gynecology, Abdomen, Vascular
  - Bandwidth: 1.3-5.7 MHz
  - Convex Radius: 60 mm
  - Physical Footprint: 80.78mm × 29.0 mm
  - Biopsy Guide: NGB-031, multi angle, reusable
- C5-1E
  - Application: Abdomen, Gynecology, Obstetrics, Vascular, Nerve,
- musculoskeletal
  - Bandwidth: 1.3-5.7 MHz
  - Convex Radius: 60mm
  - Physical Footprint: 76.5mm × 28mm
  - Biopsy Guide: NGB-022, multi angle, reusable
- C7-3E
  - Application: Abdomen, Gynecology, Obstetrics, Vascular
  - Bandwidth: 2.6-7.2 MHz
  - Convex Radius: 50mm
  - Physical Footprint: 71mm × 21.5 mm
  - Biopsy Guide: NGB-019, multi angle, reusable
- C6-2GE
  - Application: Abdomen, Gynecology, Obstetrics
  - Bandwidth: 2.6-8.2 MHz
  - Convex Radius: 20mm
  - Physical Footprint: 37.6mm × 19.0mm
  - Biopsy Guide: NGB-024, multi angle, reusable
- C11-3E
  - Application: Abdomen, Vascular
  - Bandwidth: 2.6-12.8 MHz
  - Convex Radius: 15mm
  - Physical Footprint: 32.8mm × 25mm
  - Biopsy Guide: NGB-018, multi angle, reusable
- V11-3E
  - Application: Gynecology, Obstetrics, Urology
  - Bandwidth: 2.6-12.8 MHz
  - Convex Radius: 11mm
  - Physical Footprint: 24.85mm × 21.8mm
  - Biopsy Guide: NGB-004, single angle, reusable
- V11-3BE
  - Application: Gynecology, Obstetrics, Urology
  - Bandwidth: 2.6-12.8 MHz
  - Convex Radius: 11mm
  - Physical Footprint: 24.8mm × 21.8mm

- Biopsy Guide: NGB-004, single angle, reusable
- V11-3HE
  - Application: Gynecology, Obstetrics, Urology
  - Bandwidth: 2.6-12.8 MHz
  - Convex Radius: 11mm
  - Physical Footprint: 24.9mm × 21.8mm
  - Biopsy Guide: NGB-025, single angle, reusable

## 9.2 Double Micro-Curved array

- CB10-4E
  - Application: Urology
  - Bandwidth: 2.6-12.8 MHz
  - Convex Radius: 9mm
  - Biopsy Guide: NGB-004, single angle, reusable
- 6LB7E
  - Application: Urology
  - Bandwidth: 2.6-12.8 MHz
  - Number of Elements: 128
  - FOV (max): 152°
  - Width (max): 6.57cm
  - Extended FOV: 192° (convex); 20° (linear)
  - Convex Radius: 10mm
  - Linear Physical Footprint: 20.6mm × 20.6mm
  - Convex Physical Footprint: 21.9mm × 21.9mm
  - Biopsy Guide: NGB-009, single angle, reusable

## 9.3 Linear array

- L12-3E
  - Application: Vascular, Small Parts, Abdomen, Pediatric, Musculoskeletal, Nerve
  - Bandwidth: 3.0-13.5 MHz
  - Width (max): 3.81cm
  - Physical Footprint: 45.7mm × 10.9mm
  - Biopsy Guide: NGB-007, multi angle, reusable
- L14-5WE

- Application: Musculoskeletal, Nerve, Abdomen, Pediatric, Vascular, Small Parts, Abdomen
- Bandwidth: 4.0-14.0MHz
- Width (max): 5.44cm
- Physical Footprint: 66mm × 23mm
- Biopsy Guide: NGB-035, multi angle reusable

- L14-6WE
  - Application: Musculoskeletal, Nerve, Pediatric, Vascular, Small Parts
  - Bandwidth: 3.5-16.0 MHz
  - Width (max): 5.08cm
  - Physical Footprint: 59.1mm × 12mm
  - Biopsy Guide: NGB-007, multi angle, reusable

- L14-6NE
  - Application: Musculoskeletal, Nerve, Small Parts, Vascular, Pediatric
  - Bandwidth: 3.5-16.0 MHz
  - Width (max): 3.81cm
  - Physical Footprint: 45.7mm × 10.9mm
  - Biopsy Guide: NGB-007, multi angle, reusable

- L9-3E
  - Application: Vascular, Small Parts, Abdomen, Pediatric, Musculoskeletal, Nerve, Obstetrics
  - Bandwidth: 1.8-9.8 MHz
  - Width (max): 4.37cm
  - Physical Footprint: 62mm × 22mm
  - Biopsy Guide: NGB-034, multi angle, reusable

- L16-4HE
  - Application: Intra-operative, Musculoskeletal, Nerve, Small Parts, Vascular, Pediatric
  - Bandwidth: 3.5-16.0 MHz
  - Width (max): 2.54cm
  - Physical Footprint: 11.5mm × 38mm (slant width)/ 34.8mm (straight width)
  - Biopsy Guide: not available

- LM14-6E
  - Application: Musculoskeletal, Nerve,

#### Small Parts, Vascular, Pediatric

- Bandwidth: 3.5-16.0 MHz
- Width (max): 3.81cm
- Physical Footprint: 44.4mm × 8.7mm
- Biopsy Guide: NGB-023, multi angle, reusable

- L20-5E

- Application: Abdomen, Small Parts, Musculo-skeletal, Vascular, nerve
- Bandwidth: 6.0-23.0 MHz
- Width (max): 2.85cm
- Physical Footprint: 42.23mm × 22.10mm
- Biopsy Guide: not available

#### 9.4 Phased array

- SP5-1E

- Application: Cardiac, Vascular, Abdomen
- Bandwidth (Adult Cardiac): 1.0-5.0 MHz
- FOV (Max.): 90°
- Physical Footprint: 38.2mm\*30.5mm
- Biopsy Guide: NGB-011, multi angle, reusable

- P4-2NE

- Application: Cardiac, Vascular, Abdomen
- Bandwidth (Adult Cardiac): 1.5-4.5 MHz
- FOV (Max.): 90°
- Physical Footprint: 28.1mm × 18.9mm
- Biopsy Guide: NGB-011, multi angle, reusable

- P7-3E

- Application: Cardiac, abdomen, nerve, pediatric, vascular
- Bandwidth: 2.3-7.2 MHz
- FOV (Max.): 90°
- Physical Footprint: 34mm × 24.5mm
- Biopsy Guide: not available

- P10-4E

- Application: Cardiac, abdomen, nerve, pediatric, vascular
- Bandwidth: 3.0-11.4 MHz

- FOV (Max.): 90°

- Physical Footprint: 15.1mm × 10.2mm

- Aperture: 15mm × 9.1mm

- Biopsy Guide: not available

#### 9.5 Volume curved array

- SD8-1E

- Application: Obstetrics, Gynecology, Abdomen

- Bandwidth: 2.6-8.2 MHz

- Convex Radius: 45mm

- Physical Footprint: 75.7mmx52.6mm

- Biopsy Guide: NGB-039, multi angle, reusable

- D7-2E

- Application: Obstetrics, Gynecology, Abdomen

- Bandwidth: 2.6-8.2 MHz

- Convex Radius: 40mm

- Physical Footprint: 74mmx49mm

- Biopsy Guide: Not available

- D8-2E

- Application: Obstetrics, Gynecology, Abdomen

- Bandwidth: 2.6-8.2 MHz

- Convex Radius: 50mm

- Physical Footprint: 77.1mmx49.1mm

- Biopsy Guide: NGB-040, multi angle, reusable

- DE11-3E

- Application: Gynecology, Obstetrics, Urology

- Bandwidth: 2.6-12.8 MHz

- Convex Radius: 11mm

- Physical Footprint: 24.9mm x21.8mm

- Biopsy Guide: NGB-027, single angle, reusable

- DE10-3WE

- Application: Gynecology, Obstetrics, Urology

- Bandwidth: 2.6-12.8 MHz

- Convex Radius: 10mm

- Physical Footprint: 24mm x24mm

- Biopsy Guide: NGB-021, single angle, reusable

- 9.6 TEE
- P7-3TE
  - Application: Cardiac
  - Bandwidth: 2.3~7.2 MHz
  - FOV (max): 90°
  - Physical Footprint: 14mm × 12mm
  - Biopsy Guide: Not available

- 9.7 Pencil
- CW5s
  - Application: Vascular
  - Number of Elements: 2
  - CW Frequency: 5.0MHz
  - Biopsy Guide: Not available

## 10 Peripheral Devices and Accessories

### (Option)

- 10.1 Black/white video printer
- Digital
    - MITSUBISHI P95DW-N
    - SONY UP-D898MD
  - Analog
    - SONY UP-X898MD
- 10.2 Color digital video printer
- SONY UP-D25MD
- 10.3 Graph/Text printer
- HP OFFICEJET PRO 8100 (the printer driver requires manually installed)
- 10.4 Built-in DVR
- Built-in digital video recorder, save space and is a useful tool for education and memory
  - Max storage length each time
- 10.5 Gel warming
- Easily be disassembled off system for cleaning
  - Temperature with 3 levels
  - Light indicator for temperature protecting
  - Dimension
  - Weight
  - Continuous operation time
- 10.6 Footswitch
- USB port: FS-81-SP-2 (single pedal), 971-SWNOM (2/3-pedal)
  - Support User-definable functions

(Freeze, Save, Print)

- 10.7 ECG
- 6-pin, AHA/IEC, for 3-lead wires
  - ECG wave display
  - Gain
  - Sweep speed
- 10.8 PCG (not for sale in EU countries)
- PCG wave display
  - Gain
  - Smooth
- 10.9 Barcode reader
- SYMBOL LS2208 (1D)
  - SYMBOL DS4308 (2D)
- 10.10 Built-in Wireless adapter
- Encryption
  - Max transfer speed
  - Protocols
- 10.11 Built-in Battery
- Replaceable and rechargeable lithium battery.
  - Can work for more than 68m when powered by a sufficiently-charged battery.
  - Restore from standby mode: 10s
  - Full battery lasts for more than 24h in standby mode
  - Light indicator for standby mode
  - Empty battery recharged to full in less than 4h

## 11 System Inputs and Outputs

- 11.1 Video/Audio input
- Microphone
- 11.2 Video/Audio output
- Video out
  - S-Video out
  - HDMI
  - VGA out
  - Audio out
- 11.3 Physio input
- Support ECG/PCG signal
  - ECG
  - PCG
- 11.4 Other input/output
- USB
  - Ethernet
  - Remote
  - Serial Port

## 12 Safety and Conformance

### 12.1 Quality standards

- ISO 9001
- ISO 13485

### 12.2 Design standards

- CSA C22.2 No. 601-1
- 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 IEC60601-2-37
- EN 62304 and IEC 62304
- EN 62366 and IEC 62366
- EN ISO 17664 and ISO 17664

### 12.3 CE declaration

The Device is fully in conformance with the Council Directive 93/42/EEC Concerning Medical Devices. The number adjacent to the CE marking (0123) is the code of the EU-notified body that certified meeting the requirements of Annex I excluding (4). of the Directive.

#### NOTICE:

Not all features or specifications described in this document may be available in all transducers and/or modes.

Mindray reserves the right to make changes in specifications and features shown herein, or discontinue the product at any time without notice or obligation. Contact Mindray Representative for the most current information