DC-60 Exp (with X-Insight)

Color Doppler Ultrasound System

Datasheet

Release V2.0

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healthcare within reach

1 System Overview

1.1 Application

- Abdomen
- Obstetrics
- Gynecology
- Cardiology
- Small parts
- Urology
- Vascular
- Pediatrics
- Emergency Medicine
- Nerve
- Others

1.2 Transducer types

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

1.3 Imaging modes

- B-Mode
- THI and PSH^{TM} (Phase Shift Harmonic Imaging)
- M-Mode/Color M-mode
- Free Xros M^{TM} (Anatomical M-mode)
- Free Xros CM^{TM} (Curved Anatomical M-mode)
- Color Doppler Imaging
- Power Doppler Imaging/Directional PDI
- Pulsed Wave Doppler
- Continuous Wave Doppler
- TDI
- Smart 3D^{TM} (Freehand 3D)
- 3D Layout
- SCV+
- iPage+
- Smart Planes CNS
- Smart FLC
- 3D Color
- Smart Volume
- STIC
- 4D
- Natural Touch Elastography
- Contrast Imaging
- Stress Echo
- iScape^{TM} View (Panoramic Imaging)

1.4 Standard features

- B-Mode
- THI and PSH^{TM}
- M-Mode
- Color M Mode
- Color Doppler Imaging
- Power Doppler Imaging and Directional PDI
- Pulsed Wave Doppler
- High Pulsed Repetition Frequency
- iBeam^{TM} (Spatial Compound Imaging)
- iClear^{TM} (Speckle Suppression Imaging)
- iTouch^{TM} (Auto Image Optimization)
- Echo Boost^{TM}
- Zoom/iZoom (Full Screen Zoom)
- FCI (Frequency Compound Imaging)
- B steer
- ExFOV (Extended Field of View)
- HR Flow^{TM} (High Resolution Flow)
- Raw data processing
- 4 active transducer sockets(include one high density transducer socket), 1 more for pencil probe only
- 1T HDD hard drive (512GB SSD is optional)
- 5 USB 3.0 ports, 1 more dedicated USB port for printer
- Touch gestures
- iStation
- iStorage
- MedSight^{TM}
- MedTouch^{TM}
- iScanHelper
- Smart Track

1.5 Optional features

- Continuous Wave Doppler
- ECG
- Free Xros M^{TM}

- Free Xros CM™
- iScape™ View
- Smart 3D™
- Real-time 4D
- iLive
- 3D Layout
- SCV+
- iPage+
- Smart Planes CNS
- Smart FLC
- Color 3D
- Smart Volume
- STIC
- Contrast Imaging
- Contrast Imaging™ Quantification Analysis Software
- **LVO(Left Ventricular Opacification)**
- Auto IMT
- AutoEF
- TDI (Include TVI, TVD, TVM, TEI)
- TDI QA (TDI Quantitative Analysis)
- TT QA (Tissue Tracking Quantitative Analysis)
- Stress Echo
- DICOM
- Clinical Measurement Package
- Smart OB™ (Auto OB measurement)
- Smart NT™(Auto NT measurement)
- iWorks™ (Auto Workflow Protocol)
- iNeedle™ (Needle Visualization Enhancement)
- Natural Touch Elastography
- Built-in battery
- Gel warmer
- DVD R/W driver
- Built-in wireless adapter

1.6 Language support

- Software: English, Chinese, German, Spanish, French, Italian, Portuguese, Russian, Czech, Polish, Turkish, Norwegian, Serbian, Finnish, Danish, Icelandic, Swedish, Hungarian
- Keyboard input: English, Chinese, German, Spanish, French, Italian, Portuguese, Russian, Czech, Polish Icelandic, Norwegian, Swedish, Finnish, Turkish, Danish, Hungarian, Serbian
- Control panel overlay: Chinese, Italian, Portuguese, Spanish, German, Russian, French, Czech, Polish
- User manual: English, Chinese, German, Spanish, French, Italian, Portuguese, Russian, Turkish, Polish, Serbian

2 Physical Specification

2.1 Dimension and weight

- Depth: 850±5mm (Lifting support arm); 825±5mm (Dual-Wing Floating Arm)
- Width: 510±5mm
- Height: 1190±5mm (Lifting support arm); 1090±5mm (Dual-Wing Floating Arm)
- Weight: Approx. 84Kg (no peripherals, no batteries) (battery weight: 1.03Kg)

2.2 Monitor

- 21.5-inch high resolution color LED monitor
- Resolution: 1920*1080
- Viewing angle: 178° left/right; 178° up/down
- Digital on-screen display of brightness and contrast controls
- Independent tilt up of 110 degrees from horizontal, and swivel left/right of -90 to 90 degrees (Lifting support arm)/-90 to 150 degrees (Dual-Wing Floating Arm)
- Frame rate (Hz): 60Hz

2.3 Multi-directional articulating monitor arm for better user-friendly

experience

Dual-Wing Floating Arm

- Rotate angle: 90 degrees to the left and 150 degrees to the right along with the support arm
- Up/Down: 150mm
- Front/back: 300mm

Lifting support arm

- Rotate angle: 90 degrees to the left/right along with the support arm
- Up/Down: 150mm

2.4 Audio speakers

- Stereo audio speakers
- Audio data range: 130Hz~15kHz

2.5 Wheels

- Diameter: 125mm
- Castors (4): total lock and break

2.6 Probe port and holder

- Probe ports: 4 active ports(include one high density socket), 1 more for pencil probe only
- Detachable probe holder: 7 as standard, including one dedicated holder for endocavity probe(left side holder as default, possible to select it as the right side holder before order); one more dedicated endocavity probe holder as optional

2.7 Electrical power

- Voltage: 100-127V~, or 220-240V~
- Frequency: 50/60Hz
- Power consumption: Max. 630VA
- A/D-converter velocity (MHz): 40 (receiving)

2.8 Operating Environment

- Ambient temperature: 0-40°C
- Relative humidity: 30%-85% (no condensation)
- Atmospheric pressure: 700hPa-1060hPa

2.9 Storage & Transportation Environment

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

3 User Interface

3.1 Control panel

- User-centric control panel with home-based layout favors easy access to keys
- Backlit keys ensure accurate work in the dark room
- 6 Programmable keys available for user-defined functions (<P>,<F3-F6>,<F12>)
- 8-segment TGC control
- Full-sized, backlit QWERTY keyboard for text input, function keys and system programming
- Adjustable key volume and trackball speed meet different needs
- Dedicated palm rest design to help reduce user repetitive stress injury
- Independent rotation and up/down of control panel facilitates optimal positioning
  - rotate: 45 degrees (from center)
  - down/up: 140mm (pull 50mm range)

3.2 Touch screen

- 13.3-inch capacitive touch screen
- Resolution: 1920*1080
- Touch screen panel angle adjustable for easy visualization: 30 degrees in rotation
- Digital brightness and contrast adjustment through preset
- Viewing angle: 170 degrees left/right; 170 degrees up/down
- Support touch screen gestures
- Support thin latex gloves on touch screen.

3.3 Support touch gestures

- Image mapping on touch screen: swipe down from the top edge to project image from monitor to touch

screen. Swipe up from the bottom edge to remove projected image and show regular parameter interface.

- Page up and down: swipe horizontally on regular imaging parameter interface to change different pages; or swipe horizontally on projected images/cine loops to review them one by one
- Menu display: swipe from left edge to right to show the 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.

3.4 System boot-up (1T HDD standard)

- Boot-up from complete shut-down in about 55 sec
- Shut-down in about 23 sec

3.5 Comments

- Supports text input and arrow
- Support freehand marking on touch screen
- Adjustable text size and arrow size
- Supports home position
- Covers various application
- User customizable

3.6 Body marks

- More than 144 bodymarks for versatile application
- User customizable

3.7 Exam mode presets

- 38 system exam modes (unlimited number for user-defined ones)

3.8 Screen information*

- Common info:
  - Mindray logo
  - Hospital name
  - Exam date
  - Exam time
  - Acoustic power
  - Mechanical index
  - Tissue thermal index
  - ID, Last name, First Name, Middle initial, Gender, Age
  - Probe model
  - ECG icon (when ECG connected)
  - Operator
  - TGC Curve
  - Focus position
  - Thumbnail
  - Imaging parameters
  - Help guidance
  - Dynamic Trackball indices

*Not all items are listed in this part, detail info please refer to user manual

4 Imaging Parameters

4.1 Overview

- Echo-enriched Beamforming
- Up to 131072 channels
- 12-beamforming

4.2 B-mode

- Display formats: Single(B), Dual(B+B), Quad(4B)
- iClear^{TM}: Off; 7 steps
- iBeam^{TM}: (All probes except for phased array probes)
  - L13-3/L14-6NE/L14-6WE: Off; 1-5, 5 steps;
  - Other probes: Off, 1-3, 3 steps;
- iTouch^{TM}: On/off, -12～12, 3db/step
- Dual Live: side by side live display
- Image quality: Pen/Gen/Res/HPen/HGen/HRes/HPen-Gen (depends on probe)
- B steer: available on linear transducers

- ExFOV: available on convex, linear, and volume transducers
- Depth: 30 levels (1.5-40 cm; all depend on transducer)
- Frame rate (max): 1388f/s
- Acoustic output power: 3.2%-100%;101 levels
- TGC: 8 pods on control panel
- LGC: 8 segments on touch screen
- Dynamic range: 30-250 (depends on probe)
- Gain: 0-100, 1/step
- Focus number: 1-4 (depend on transducer)
- Focus position: 16 levels
- FOV: continuously adjustable
- Line density: L, M, H, UH
- Persistence: 0~7, 1/step
- Horizontal Scale: on/off
- L/R flip and U/D flip: on/off
- Rotation: 0, 90, 180, 270
- TSI: general/muscle/fluid/fat
- Gray Map: 1-8, 8 types
- Tint map: off; 1-8, 8 types
- Auto Merge: on/off
- Middle Line: on/off

4.3 THI and PSH

- Available on all types of transducer
- Patent PSH^{TM} technology, obtains purified harmonic, better contrast resolution, higher SNR, exceptional high frequency harmonic
- iClear^{TM} available
- Image quality: HPen/HGen/HRes/HPen-Gen (depends on probe)

4.4 M-mode

- Display formats: V2:3, V3:2, H2:3, V3:1, FULL (V: vertical, H: horizontal)
- Color M-mode available
- Acoustic output power: 3.2%-100%，101 levels
- Dynamic range: 30-250 (depends on probe)
- Gain: 0-100, 1/step
- M sweep speeds: 6 levels;145mm/s, 75mm/s, 50mm/s, 35mm/s, 25 mm/s, 20mm/s
- M soften: 0~4, 1/step
- Tint map: off; 1-8, 8 types
- Gray Map: 1-8, 8 types
- Edge enhance: 0~3, 1/step

4.5 Free Xros M^{TM} (option)

- Display formats: V2:3, V3:2, H2:3, V3:1 (V: vertical, H: horizontal)
- Color Free Xros M available
- Up to 3 lines
- Display all lines
- Sweep speeds: 6 levels; 145mm/s, 75mm/s, 50mm/s, 35mm/s, 25mm/s, 20mm/s
- M Tint map: off; 1-8, 8 types
- Gray Map: 1-8, 8 types

4.6 Free Xros CM^{TM} (option)

- Only available in TDI mode
- Display formats: V2:3,V3:2,H2:3,V3:1 (V: vertical, H: horizontal)
- Gain: 0-100, 1/step
- Sweep speeds: 6 levels; 145mm/s, 75mm/s, 50mm/s, 35mm/s, 25mm/s, 20mm/s
- Tint map: off;1-8, 8 types
- Gray Map: 1-8, 8 types
- Edit, undo, delete function for curved line

4.7 Color Doppler Imaging

- Dual live
- HR Flow^{TM}: High Resolution Flow provides better image quality and flow sensitivity (linear and convex transducer)
- Image quality: Pen, Gen, Res
- Steer: max. 30 degrees (linear transducer)
- Max frame rate: 350f/s
- Acoustic output power: 3.2-100%;101 levels
- Gain: 0-100, 2/step

- ROI size/position: adjustable
- Scale: 30 steps, 1.0cm/s to 239.5 cm/s
- Baseline: -8-8,17 steps
- Wall filter: 8 steps
- PRF: 0.1kHz to 15.2kHz
- Packet size: 0-3, 1/step
- Flow state: L, M, H
- Smooth: 0-6, 1/step
- B/C align: on/off
- Priority: 0-100%, 1%/step
- Color map: 21 types
- Invert: on/off
- Persistence: 0-6, 1/step
- Velocity tag: on/off
- Line density: L, M, H, UH
- Smart Track: on/off

4.8 Power Doppler Imaging

- Dual live
- HR Flow^{TM}: High Resolution Flow provides better image quality and sensitivity
- Support directional power Doppler
- Image quality: Pen, Gen, Res
- Acoustic output power: 3.2%-100%;101 levels
- Dynamic range: 10-70, 5/step
- Gain: 0-100, 2/step
- ROI size/position: adjustable
- Scale: 30 steps
- Wall filter: 8 steps
- PRF: 0.1-13.0kHz
- Packet size: 0-3, 1/step
- Flow state: L, M, H
- Smooth: 0-6, 1/step
- B/C align: on/off
- Priority: 0-100%, 1%/step
- Color map: 4 types
- Directional color map: 4 types
- Persistence: 0-6, 1/step
- Line density: L, M, H, UH

4.9 PW/CW-Mode

- Display formats: V2:3,V3:2,H2:3,V3:1,FULL(V: vertical, H: horizontal)
- Duplex/Triplex: on/off
- Image quality: Pen, Gen, Res
- Sample volume size: 0.5-20mm (PW only)
- Sample gate depth: adjustable
- PW Scale: 30 steps, 0.04cm/s to 9.00m/s
- CW Scale: 30 steps, 0.038cm/s to 37.5m/s
- Baseline: -4-4, 1/step
- PW Steer: max. 30 degrees (linear transducer)
- Volume: 0-100%, 2%/step
- PW PRF: 0.7kHz to 24.0kHz
- CW PRF: 0.3kHz to 100.0kHz
- Gain: 0-100, 2/step
- Dynamic range: 24-72, 2/step
- Sweep speed: 6 steps;145mm/s, 75mm/s, 50mm/s, 35mm/s, 25mm/s, 20mm/s
- Wall filter: 7 steps, PW:28~1000; CW: 10~1500
- Invert: on/off
- Auto invert: on/off
- Angle correction: -89-89 degrees, 1/step
- Quick angle: -60, 0, 60 degrees
- Gray map: 1-10, 10 types
- Tint map: Off; 1-8, 8 types
- Time/frequency resolution: 4 steps
- Auto calc: on/off
- Auto calc cycle: 1-5
- Auto Calc Parameter
- Trace Sensitivity: 0-5, 1/steps
- Trace Smooth: off, 1-4, 1/steps
- Trace area: above, below, all

4.10 TVI/TEI (Tissue Velocity/Energy Imaging, included in TDI option)

- Available on phased array transducer
- Dual live: side by side displays B and B+TVI
- Max frame rate: 1611f/s
- PRF: 0.4kHz to 15.4kHz

- Acoustic output power: 3.2%-100%;101 levels
- Gain: 0-100, 2/step
- Dynamic range: 10-70, 5/step (TEI only)
- ROI size/position: adjustable
- Scale: 30 steps, 5cm/s to 150cm/s (TVI only)
- Baseline: -8-8, 1/step (TVI only)
- Wall filter: 8 steps
- Packet size: 0-3, 1/step
- Tissue state: L, M, H
- Smooth: 0-6, 1/step
- B/C align: on/off
- Priority: 0-100%, 1%/step
- TVI maps:10 types
- TEI maps: 8 types
- Invert: on/off (TVI only)
- Persistence: 0-6, 1/step
- Velocity tag (TVI only)
- Line density: L, M, H, UH

4.11 TVD (Tissue Velocity Doppler, included in TDI option)

- Available on phased array transducer only
- Display formats: V2:3,V3:2,H2:3,V3:1,FULL(V: vertical, H: horizontal)
- Duplex/Triplex: on/off
- Acoustic output power: 3.2%-100%;101 levels
- Image quality: 2 levels (depends on transducers)
- Sample volume size: 0.5-20mm
- Sample gate depth: adjustable
- Scale: 30 steps, 4.2cm/s -360.1cm/s
- Baseline: -4-4, 1/ step
- Volume: 0-100%, 2%/step
- PRF: 0.7kHz to 24kHz
- Gain: 0-100, 2/step
- Dynamic range: 24-72, 2/step
- Sweep speed: 6 steps;145mm/s, 75mm/s, 50mm/s, 35mm/s, 25mm/s, 20mm/s
- Wall filter: 6 steps
- Invert: on/off
- Auto invert: on/off
- Angle correction: -89-89 degrees, 1/step
- Quick angle: -60, 0, 60 degrees
- Gray map: 10 types
- Tint map: Off; 8 types
- Time/frequency resolution: 0-4, 1/step

4.12 TVM (Tissue Velocity Motion, included in TDI option)

- Available on phased array transducer only
- Display formats: V2:3,V3:2,H2:3,V3:1,FULL(V: vertical, H: horizontal)
- Image quality: 3 levels
- Acoustic output power: 3.2%-100%;101 levels
- Gain: 0-100, 1/step
- M sweep speeds:6 levels;145mm/s, 75mm/s, 50mm/s, 35mm/s, 25mm/s, 20mm/s
- Gray map: 8 types
- Color maps: TVV1-TVV10, 10 types
- Baseline: -8-8, 1/step
- Priority: 0-100%, 1%/step
- Tissue state: L, M, H
- Smooth: 0-6, 1/step
- Packet size: 0-3, 1/step
- Persistence: 0-6, 1/step
- Velocity tag
- Wall Filter: 8 steps

4.13 Smart 3D™ (option)

- Smart 3D
  - Acquisition Method: Rocked, Linear
  - iClear
  - Acquisition mode: B, Color, Power
  - VR: on/off, select volume rendered image
  - MPR: on/off, select A, B and C plane
  - Display formats: MPR

only/asymmetric
- VOI: on/off
- Reset: all, orientation, reset curve
- Active quadrant: A, B, C, VR
- VR orientation: 0, 90, 180, 270
- Inversion: on/off
- Accept VOI: on/off
- Flip: flip VR
- Sync: synchronize VR with selected plane
- Render modes: Surface, Min, Max, iLive, X-ray
- View direction: down/up, left/right, front/back
- Threshold: 0-100%, 1/step (only on VR)
- Opacity: 0-100%, 5%/step (only on VR)
- Smooth: 0-20, 1/step
- Brightness: 0-100%, 2%/step
- Contrast: 0-100%, 2%/step
- Tint: off; 1-8, 8 types
- Depth VR: Off/ Black/ Cyan/ Blue/ Rose

- Auto rotation
  - Rotation control: play, single loop, loop
  - Direction: left/right, up/down
- Edit:
  - Area selection: inside polygon, outside polygon, inside contour, outside contour, inside rect, outside rect
  - Undo: undo, undo all

4.14 4D (option)

- Available on volume transducers
- Static 3D and 4D
  - 4D frame rate: max. 80 vps on D7-2E/DE10-3E
  - iClear
  - VR: on/off, select volume rendered image
  - MPR: on/off, select A, B and C plane
  - Display formats: MPR only/asymmetric
  - VOI: on/off
  - Reset: all, orientation, reset curve
  - Active quadrant: A, B, C, VR
  - VR orientation: 0, 90, 180, 270
  - Inversion: on/off
  - Accept VOI: on/off
  - Flip: flip VR
  - Sync: synchronize VR with selected plane
  - Render modes: Surface, Min, Max, iLive, X-ray
  - View direction: down/up, left/right, front/back
  - Threshold: 0-100%, 1/step (only on VR)
  - Opacity: 0-100%, 5/step (only on VR)
  - Smooth: 20 steps
  - Brightness: 0-100%, 2%/step
  - Contrast: 0-100%, 2%/step
  - Tint: off; 8 types
  - Depth VR: Off/ Black/ Cyan/ Blue/ Rose
- Color 3D
  - Supports Color and Power mode
  - Available in both Smart 3D and Static 3D
- STIC
  - Color STIC available
  - Acquiring Time: 7.5s, 10s, 12.5s, 15s, 17.5s
  - Support iPage+ viewing
  - CMPR available
  - SCV+ available
  - 3 Slice and Niche available
- iPage+
  - Slice display mode: Slice only, Slice with SCV
  - Slice cut direction: Horizontal and Vertical
  - Slice layout: 2*2, 3*3, 4*4, 5*5
  - Active quadrant: A plane, B plane,

or C plane
- Reset: All, Reset Curve, Reset Ori
- Spacing: 0.5-10mm, 0.1mm/step
- Thickness：0.0-10mm, 0.1mm/step
- Slice Number: odd numbers ranging from 3 to max. 25, depends on slice layout.
- Slice Position: a unique number for current selected slice.
- Brightness: 0%-100%, 2%/step
- Contrast: 0%-100%, 2%/step

- SCV+
  - Display mode: SCV only, SCV+ CMPR
  - Reset: All
  - Thickness: 0-30mm, 1mm/step
  - Active quadrant: A, B, C
  - Brightness: 0%-100%, 2%/step
  - Contrast: 0%-100%, 2%/step
  - Render modes: Surface, X-ray
  - Rotate RL: Only in CMPR
  - Reverse: ranges from 0-360°, 5°/step(Only in CMPR)
  - SCV Enhance: 7 levels (Only in CMPR)
  - Opacity: 0%-100%, 5%/step (Only in CMPR)
  - Trace Options: Line, Trace, Spline (Only in CMPR)
  - Reset Curve, undo last
  - MPR Measurement types: Distance, Trace, Area, Angle, Volume, Ratio of Distance, Ratio of Area
  - Support labeled measurements
- CMPR™
  - Trace Options: Line, Trace, Spline
  - Ative Quadrant: A, B, C
  - Reset Curve
  - Rotate RL: ranges from 0-360°, 5°/step
- 3D Layout
  - 3 Slice
  - Niche
  - Reset: All, Reset Curve, Reset Ori
  - Active Quadrant: A, B, C, 3 Slice/Niche
  - Niche Views: Inner, Outer
- Smart FLC (Smart Follicle)
  - Automatic follicle calculation
  - Edit ROI and detect follicle contour automatically
  - Undo: Undo, Redo, Undo All
  - Active Quadrant: A, B, C, Follicle
  - Calc: Off/On
  - Edit: Off/On
  - Edit: Divide, Merge, Add/Del
- Smart Planes CNS
  - Detect automatically the standard sections of TCP, TTP, MSP and TVP
  - Rotation around X/Y/Z axes
  - Reference line: hide/show, rotation
  - Reset: All planes/ current plane
  - Thickness: 0-30mm, 1mm/step
  - 3D iClear: off, 0~7, 1/step
  - Brightness: 0%-100%, 2%/step
  - Contrast: 0%-100%, 2%/step
  - Auto comment supported: A(anterior), P(posterior), L(Left), R(Right), U(Up), D(down), CSP, T, CH, CV, CM, LV on TCP, TTP, MSP and TVP
  - Auto measurement supported: TCD and Cist Maga (CM) on section TCP; BPD, OFD and HC on section TTP; LVW on section TVP
  - Support editing measurement results
  - Hide/show measurement results
  - MSP adjust: A/B/C
  - Support comment and bodymark on sectional plane
- Smart-V™
  - Auto 3D volume calculation

- Manual ROI on A, B, C plane separately
- Auto detect contour of target
- Volume result shows in result window

- iLive
  - Shading
  - Move Light
  - Light Position: 6
  - Render Modes: iLive
  - Soft View
  - Grad View
- Auto rotation
  - Rotation control: play, single loop, loop
  - Direction: left/right, up/down
- Edit
  - Area selection: inside polygon, outside polygon, inside contour, outside contour, inside rect, outside rect
  - Undo: undo, undo all
  - Eraser: Soft Eraser, Hard Eraser
  - Edit diameter: 8-60, 1/step
- MPR Measurement
  - Measurement types: Distance, Trace, Area, Angle, Volume, Ratio of Distance, Ratio of Area
  - Support labeled measurements

4.15 Smart Track

- Available on linear transducers 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 mode, the angle and the position of the PW sampling line, SV size, SV angle and SV position are adjusted automatically.

4.16 iScape™ View (option)

- Available on all transducers
- Acquisition method: B and Power
- Supports speed indicator
- Actual size: on/off
- Fit size: on/off
- Ruler: on/off
- Tint map: off; 1-8, 8 types
- Rotation: 0-360 degrees, 5/step

4.17 Stress Echo(option)

- Available on cardiac sector transducers
- 14 factory protocols
- User-defined protocols
- ECG triggered acquisition, display, selection, comparison, evaluation and archiving of multiple cardiac loops during various stages of a stress echo examination
- ASE 16 (with score 4-7), ASE 17 (with score 4-7)
- Customized stages: up to 6 views per stage, and up to 12 stages per study
- View: standard views (PSLA, PSAX, A4C, A2C), and customized views
- Image acquisition
  - R-wave trigger
  - Acquire mode: Manual ROI or full screen
  - Ability to acquire frames or clips in B-mode, M-mode, Color, PW and TDI
- 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)
- LV volume measurement
  - Measurement of LV Volume in all phases of cardiac cycle
- Report
  - Reporting for both Wall Motion Scoring and LV volume measurement

4.18 iBeam™
- Spatial compound imaging
- 9 angles maximum
- Available on all convex and linear transducers

4.19 iClear™
- Speckle suppression imaging
- Available for B, 3D, 4D

4.20 iTouch™
- Auto image optimization
- B-mode: gain, TGC
- Color: gain
- Power: gain
- PW: gain, baseline, scale, PRF, WF

4.21 Echo Boost™
- Only for cardiac exams
- improve the homogeneity of cardiac images through the whole field of view
- Better contrast resolution of myocardium tissue layers
- Better noise control in cardiac chambers and muscles

4.22 B steer
- Only for linear transducers

4.23 ExFOV
- Extended field of view
- Available for all convex, linear and volume transducers

4.24 Zoom
- Zoom: Spot zoom (write zoom) up to 10x, Pan zoom (read zoom) 0.8-10x
- iZoom: convertible 3 steps; normal image, zoom standard area, zoom only image area

4.25 QSave
- Quick save image parameter setting after image adjustment done
- Support Save, Save as, Restore

4.26 AutoEF (option)
- 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

4.27 TDI QA (option)
- 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
- Smooth: 1-7, 1/step
- X scale: 1-5 ,1/step
- Std.Height: 1.5-50mm
- Std.Width: 1.5-50mm
- Std.Angle: -89-90 degrees
  Export: export current data as CSV format file

4.28 UWN+ Contrast Imaging (option)
- UWN+ (Ultra Wideband Non-linear) contrast imaging technology, which provides exceptional contrast agent detecting capability, not only extracts second harmonic, but also non-linear fundamental signals
- Available on L9-3E/P4-2 transducers
- Supports Low MI contrast imaging
- Micro Flow Enhancement (MFE)available
- Timer1: on/off

- Timer2: on/off
- Pro capture: captures prospective image less than 480s preset table
- Retro capture: captures retrospective image less than 120s preset table
- Dual live: side by side displays tissue image and contrast image
- MFE: on/off
- MFE period: 0.1s, 0.2s, 0.4s, 0.6s, 0.8s, 1.0s, MAX
- Destruct: instantly destroy contrast bubbles
- Destruct voltage: -30~0 dB, 0.3/step
- Destruct time: 500-2000 ms
- iClear: off; 7 steps
- Mix: mix contrast image with tissue image
- Mix map: 7 types, available when Mix mode is active
- Persistence: 8 steps
- Dynamic range: 30-250
- Gray map: 8 types
- Tint map: off; 8 types
- Supports U/D Flip and L/R Flip
- Rotation: 0/90/180/270
- CEUS Position: on/off
- Line density: L/M/H/UH
- FOV: on/off
- FOV size/position: continuously adjustable
- ExFov: off, 1-2, 1/step
- Gain: 0-100, 1/step
- iTouch: on/off, -8~8, 2/step
- Image quality: 3 levels
- Depth: 30 levels
- TGC: 8 pods on control panel
- Acoustic output power: 3.2%-100%;101 levels
  *The DC-60 Exp 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.

4.29 UWN+ Contrast Imaging Quantitative Analysis (option)

- Support Time-Intensity Curve analysis
- Table display: display data in table
- Freehand ROI: manually deploy ROI on the cine
- Up to 8 ROIs
- Delete all
- Delete current
- Fit curve
- Raw curve
- Motion tracking: Reduce the effect of tissue movement
- X scale:1-5, 1/step
- Export: export current data as CSV format file

4.30 LVO (option)

- Only available on the phased probe in cardiac exam
- Dedicated left ventricle contrast imaging

4.31 TT QA (option)

- Tissue tracking quantitative analysis
- Mandatory ECG connection before TT QA cine acquisition
- Six views for analysis: ALAX, A4C, A2C, PSAXB, PSAXM, PSAXAP
- Reload: reload cine again for new

study
- Edit: modify trace points
- Start tracking
- Accept & compute: start tracking myocardium movement when user accept trace result
- Display effect: 0/1; at 0, tracking in velocity vector arrow; at 1, tracking in dots
- Trace method: 3 point or manual for ALAX, A4C, A2C; manual for PSAXB, PSAXM, PSAXAP
- Bull's eye: trace result in bull's eye model
- Valve's open and close time index: MVC, MVC', AVC, AVO, MVO
- Data export: export data in CSV file
- Cycle: ECG triggered cardiac cycle recognition for analysis; cycle from 1-10, 1/step
- Auto play: stop, X1/10, X1/5, X1/4, X1/3, X1/2, X1, X2, X3
- Thickness: 1-30mm, 1mm/step; adjust trace thickness
- Track point: 20-40, 1/step
- Parameter: Volume, Speed, Displacement, L Strain, L Strain R, T Strain, T Strain R, Area, R Strain, R Strain R, C Strain, C Strain R
- Smooth: 0-4, 1/step

4.32 iNeedle™ (option)

- Needle visualization enhancement
- Available on all linear transducers
- Needle steer: -50, -40, -30, -20, 20, 30, 40, 50 degrees (30 levels by <Angle> knob)

4.33 Natural Touch Elastography (option)

- Available on 7L4A, L14-6WE, L13-3, L9-3E and L14-6NE transducers
- Support strain ratio measurement
- Unique shell analysis function
- Stress compensation technology reduces deeper tissue artifacts, obtains more uniform stress throughout whole field
- Stress indicator: supports frame by frame stress indication.
- Display format: Dual live, Single E
- Map: 6 types
- Smooth: 6 steps
- Invert: on/off
- Opacity: 6 steps

4.34 iScanHelper

- Tutorial function as a guidance to show basic scanning skill with graphic of probe position, schematic of anatomy and example clinical image
- Support ABD, SMP, URO applications

5 Cine Review and Raw Data Processing

5.1 Cine review

- Available in all modes
- Frame by frame manual cineloop review or auto playback with variable speed
- Maximum cine memory up to 32346 frames or 427s (M-mode)
- Retrospective (Max. time 120s) and prospective (Max. time 480s) storage are available and length is pre-settable
- Maximum 4D cine memory up to 17957 frames
- Frame compare: displays one cine in dual format and allows frame by frame compare side by side
- Image/cine compare: max 4 for 2D/Color/Power/TDI files compare; max 2 for M/PW/TVD/TVM files compare (compare cines which are saved in same patient file)
- Jump to first and jump to last: one keystroke go to first or last frame in the cine

5.2 Raw data processing

- B-mode:
  - TGC
  - Gain
  - Dyn Ra.
  - Gray Map
  - Tint Map
  - iClear
  - L/R Flip
  - U/D Flip
  - Rotation
  - iTouch
  - LGC
  - Dual Live
  - Auto Merge
  - H Scale
  - Echo Boost
- M-mode:
  - Gain
  - Speed
  - Dyn Ra.
  - Gray Map
  - Tint Map
  - Edge Enhance
  - Time Mark
- Color:
  - Gain
  - Baseline
  - Smooth
  - Color Map
  - Priority
  - Dual Live
  - Invert
  - Velocity tag
  - B Display
- PW:
  - Gain
  - Baseline
  - Volume
  - Angle
  - Speed
  - Dyn Ra.
  - Gray Map
  - Tint Map
  - Invert
  - WF
  - Quick Angle
  - Auto Calculate
  - T/F Res
  - Auto Calc Cycle
  - Auto Calc Parameter
  - Trace Sensitivity
  - Trace Smooth
  - Trace Area
  - Time Mark

6 Measurement/Analysis and Report*

6.1 Generic measurements

- 2D-mode
  - Distance
  - Ellipse
  - Trace
  - Spline
  - Cross
  - Angle
  - Double Dist
  - Trace Len
  - Trace Len(Spline)
  - Parallel
  - IMT
  - B-Profile
  - B-Hist(Ellipse)
  - B-Hist(Trace)
  - B-Hist(Spline)
  - B-Hist(Rectangle)
  - Depth
  - Color Vel
  - Strain Hist
  - Color Vel Profile
  - ----------
  - Volume
  - Volume(Ellipse)
  - Volume(E+Dist.)
  - Ratio(D)
  - ----------
  - Volume
  - Volume

- Volume(Ellipse)
- Volume(E+Dist.)
- Ratio(A)
- Area1
- Area2
- Strain Ratio
- A
- B
- Volume Flow
- Vas Area
- TAMEAN
- TAMAX

- M-mode
  - HR
  - HR(R-R)
  - Slope
  - Distance
  - Time
  - Velocity
- Doppler mode
  - PS/ED
  - Vel
  - HR
  - HR(R-R)
  - Time
  - Acceleration
  - D Trace
  - ----------
  - Ratio(Vel)
  - Ratio(VTI)
  - ----------
  - Volume Flow
  - Vas Area
  - TAMEAN
  - TAMAX
- Automatic Doppler Spectrum Analysis
  - Heart cycle pre-settable (1, 2, 3, 4, 5)
  - Automatic real-time and retrospective tracing
  - User configurable display of items
  - Support PI, RI, TAMAX, TAMEAN, Volume Flow calculations
  - Appropriate factory setting according to applications

6.2 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
- 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
- ----------
- 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

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
- ----------
- Ovary Vol
- UT Vol
- UT SUM
- UT-L/CX-L
- Follicle1
- Follicle2
- Follicle3
- Follicle4
- Follicle5
- Follicle6
- Follicle7
- Follicle8
- Follicle9
- Follicle10
- Follicle11
- Follicle12
- Follicle13
- Follicle14
- Follicle15
- Follicle16
- ----------
- Uterus
- UT L
- UT H
- UT W
- Endo
- Uterine Cervix
- Cervix L
- Cervix H
- Cervix W

- Ovary
  - Ovary L
  - Ovary H
  - Ovary W
- Follicle1
  - Follicle1 d1
  - Follicle1 d2
  - Follicle1 d3
- Follicle2
  - Follicle2 d1
  - Follicle2 d2
  - Follicle2 d3
- Follicle3
  - Follicle3 d1
  - Follicle3 d2
  - 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

- Obstetrics

  B-Mode
  - GS
  - YS
  - CRL
  - NT
  - BPD
  - OFD
  - HC
  - AC
  - FL
  - TAD
  - APAD
  - TCD
  - CM
  - LVW
  - HW
  - OOD
  - IOD
  - HUM
  - Ulna
  - RAD
  - Tibia
  - FIB
  - CLAV
  - Vertebrae
  - MP
  - Foot
  - 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
- ----------
- 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
- MAD
- ----------
- AFI
  - AF1
  - AF2
  - AF3
  - AF4
- Uterus
  - UT L
  - UT H
  - UT W
  - Endo

M-Mode
- FHR
- 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
- 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)
- LA Major
- LA Minor
- LA Area
- LVOT Diam
- Ao Diam(2D)
- ACS(2D)
- AV Diam
- Ao Isthmus(2D)
- Ao Sinus Diam(2D)
- Ao st junct(2D)
- AVA
- Ao Arch Diam(2D)
- Ao Asc Diam(2D)
- Ao Desc Diam(2D)
- Duct Art Diam
- Post Ductal
- Pre Ductal
- MCS(2D)
- MV Diam
- MV EPSS(2D)
- MVA
- TV Diam
- TVA
- PV Diam
- RVOT Diam
- MPA Diam(2D)
- RPA Diam(2D)
- LPA Diam(2D)
- IVC Diam(Expir)
- IVC Diam(Insp)
- SVC Diam(Expir)
- SVC Diam(Insp)
- LCA Diam
- RCA Diam
- PEd(2D)
- PEs(2D)
- VSD Diam
- ASD Diam
- PDA Diam
- PFO Diam
- AutoEF
- ----------
- LA/Ao(2D)
- ----------
- LV(2D)
- Diastole(2D)
- Systole(2D)
- IVSd(2D)
- LVIDd(2D)
- LVPWd(2D)
- IVSs(2D)
- LVIDs(2D)
- LVPWs(2D)
- HR(2D)
- Simpson
- A2Cd
- A2Cs
- A4Cd
- A4Cs
- HR(2D)
- Mod.Simpson

- LVLd apical
- LVLs apical
- LVAd sax MV
- LVAs sax MV
- LVAd sax PM
- LVAs sax PM
- HR(2D)
- S-P Ellipse
- LVLd apical
- LVAd apical
- LVLs apical
- LVAs apical
- HR(2D)
- B-P Ellipse
- LVIDd(2D)
- LVAd sax MV
- LVIDs(2D)
- LVAs sax MV
- LVAd apical
- LVAs apical
- HR(2D)
- Bullet
- LVLd apical
- LVLs apical
- LVAd sax MV
- LVAs sax MV
- HR(2D)
- LV Mass(Cube-2D)
- IVSd(2D)
- LVIDd(2D)
- LVPWd(2D)
- LV Mass(A-L)
- LVLd apical
- LVAd sax Epi
- LVAd sax Endo
- LV Mass(T-E)
- LVAd sax Epi
- LVAd sax Endo
- a
- d
- LA Vol(Simp)
- LA Vol(A2C)
- LA Vol(A4C)
- LA Vol(A-L)
- LA apical
- LAA(A2C)
- LAA(A4C)
- 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
- 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

M-Mode
- RVAWd(M)
- RVAWs(M)
- 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)

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
- 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
- ----------
- Renal Vol
- Prostate Vol
- Testicular Vol
- Pre-BL Vol
- Post-BL Vol
- Mictur.Vol
- ----------
- Kidney
  - Renal L
  - Renal H
  - Renal W
  - Cortex
- Adrenal
  - Adrenal L
  - Adrenal H
  - Adrenal W
- 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
- Prostate
  - Prostate L
  - Prostate H
  - Prostate W
- Seminal Vesicle
  - Seminal L
  - Seminal H
  - Seminal W
- Testis
  - Testicular L
  - Testicular H
  - Testicular W
- Bladder
  - Pre-BL L
  - Pre-BL H
  - Pre-BL W
  - Post-BL L
  - Post-BL H
  - Post-BL W
- Prostate Mass1
  - Prostate Mass1 d1
  - Prostate Mass1 d2
  - Prostate Mass1 d3
- Prostate Mass2
  - Prostate Mass2 d1

- Prostate Mass2 d2
- Prostate Mass2 d3
- Prostate Mass3
- Prostate Mass3 d1
- Prostate Mass3 d2
- Prostate Mass3 d3
- Testicular Mass1
- Testicular Mass1 d1
- Testicular Mass1 d2
- Testicular Mass1 d3
- Testicular Mass2
- Testicular Mass2 d1
- Testicular Mass2 d2
- Testicular Mass2 d3
- Testicular Mass3
- Testicular Mass3 d1
- Testicular Mass3 d2
- Testicular Mass3 d3
- Epididymis
- Epididymis L
- Epididymis H
- Epididymis W

D-Mode

- Testicular A
- Testicular V
- Epididymis A
- Epididymis V

- Vascular

B-Mode

- CCA IMT
- Bulb IMT
- ICA IMT
- ECA IMT
- ----------
- Stenosis D
- Stenosis A
- ----------
- Stenosis A
- A1
- A2
- IMT
- CCA IMT
- Bulb IMT
- ICA IMT
- ECA IMT

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.
- ----------
- 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
  - Thyroid Cyst3 d1

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

D-Mode

- STA
- ITA
- Testicular A
- Testicular V
- Epididymis A

- Epididymis V

- Orthopedics
  - B-Mode
  - HIP
  - HIP-Graf
  - HIP()
  - HIP()
  - d/Da

6.3 Report

- Specific report template by application
- User-defined report template
- Editable value in report
- Images selectable
- Able to export as PDF/RTF file

6.4 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
- IMT trend analysis

6.5 Smart OB™ (optional)

- Auto measurement for OB, a special tool for easy OB scan, and greatly reduce time and increase productivity
- Support BPD, HC, OFD, FL, AC
- Better get GA before start auto AC
- Measurement result can be modified by user

6.6 Smart NT™

- NT auto measurement
- Auto detection of NT inside ROI

* 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

- 1T HDD hard drive. More than 835 GB internal hard drive for patient data storage
  Or, 512 GB hard drive. More than 380 GB internal hard drive for patient data storage
- 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/MP4 format)
- Support backup/send to USB devices, DVD-RW media

7.3 iWorks™ (option)

- 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 probe indicator is pre-settable
- iWorks setup measurement: select

existing measurement library
- Template import and export are available

8 Connectivity

8.1 Ethernet Network Connection

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

8.2 DICOM 3.0

- DICOM basic (option)
  - Verify (SCU, SCP)
  - Print
  - Store
  - Storage Commitment
  - Media Exchange
- DICOM Worklist (option, HL7 supported)
- 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 Breast Report (option)

8.3 iStorage™(included in UltraAssist)

- Direct network storage tool between ultrasound system and personal computer

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 and IOS powered smart devices
- Android 4.0 or above; IOS 7.0 or above
- DICOM 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 or above; IOS 7.0 or above
- DICOM not necessary

9 Transducers

9.1 Curved array

- 3C5A
  - Application: OB/GYN, Abdomen, Vascular
  - Bandwidth: 1.3~5.7MHz(-20dB)
  - Number of Elements: 128
  - FOV (max): 72°
  - Extended FOV: 112°
  - Convex Radius: 50mm
  - Depth: 4-40cm
  - Physical Footprint: 76mm × 29.5mm
  - Footprint: 62mm × 16mm
  - B-mode Frequencies: 1.3~3.2, 1.9~4.6, 2.3~5.7MHz
  - Harmonic Frequencies: 4.0, 5.0, 6.0MHz
  - Doppler Frequencies: 2.3, 2.8, 3.0MHz
  - Biopsy Guide: NGB-006, multi angle, reusable
- 6C2

- Application: Pediatric, Cardiac, Abdominal, Cephalic, Nerve, Vascular
- Bandwidth: 2.6~12.8MHz(-20dB)
- Number of Elements: 128
- FOV (max): 102°
- Extended FOV: 122°
- Convex Radius: 15mm
- Depth: 1.5-28cm
- Physical Footprint: 33.5mm × 24.8mm
- Footprint: 29mm × 10mm
- B-mode Frequencies: 2.6~6.5, 3.2~7.9, 4.7~12.8MHz
- Harmonic Frequencies: 8.0, 8.9, 10MHz
- Doppler Frequencies: 4.4, 5.0, 5.7MHz
- Biopsy Guide: NGB-005, multi angle, reusable

- C6-2
  - Application: Gynecology, Obstetrics, Abdominal, Vascular
  - Bandwidth: 1.3~5.7MHz(-20dB)
  - Number of Elements: 128
  - FOV (max): 60°
  - Extended FOV: 100°
  - Convex Radius: 60mm
  - Depth: 4-40cm
  - Physical Footprint: 76.5mm × 28mm
  - Footprint: 64.9mm × 16.2mm
  - B-mode Frequencies: 1.3~3.2, 1.9~4.6, 2.3~5.7MHz
  - Harmonic Frequencies: 3.8, 4.0, 5.0, 6.0MHz
  - Doppler Frequencies: 2.0, 2.5, 3.0MHz
  - Biopsy Guide: NGB-022, multi angle, reusable
- V11-3
  - Application: OB/GYN, Urology
  - Bandwidth: 2.6-12.8MHz(-20dB)
  - Number of Elements: 128
  - FOV (max): 139°
  - Extended FOV: 179°
  - Convex Radius: 11mm
  - Depth: 1.5-28cm
  - Physical Footprint: 24.85mm × 21.8mm
  - Footprint: 24mm × 9mm
  - B-mode Frequencies: 2.6-6.5, 3.2-7.9, 4.7-12.8MHz
  - Harmonic Frequencies: 7.0, 8.0, 9.0MHz
  - Doppler Frequencies: 4.4, 5.0, 5.7MHz
  - Biopsy Guide: NGB-004, single angle, reusable
- V11-3B
  - Application: OB/GYN, Urology
  - Bandwidth: 2.6-12.8MHz(-20dB)
  - Number of Elements: 128
  - FOV (max): 139°
  - Extended FOV: 179°
  - Convex Radius: 11mm
  - Depth: 1.5-28cm
  - Physical Footprint: 24.8mm × 21.8mm
  - Footprint: 24.1mm × 9mm
  - B-mode Frequencies: 2.6-6.5, 3.2-7.9, 4.7-12.8MHz
  - Harmonic Frequencies: 7.0, 8.0, 9.0MHz
  - Doppler Frequencies: 4.4, 5.0, 5.7 MHz
  - Biopsy Guide: NGB-004, single angle, reusable

9.2 Linear array

- 7L4A
  - Application: Small organ, Vascular, Orthopedics, Musculo-skeletal, Abdominal, Pediatric
  - Bandwidth: 3.6-13.5MHz(-20dB)
  - Number of Elements: 128
  - Field of View (max): 38mm
  - Steered Angle: +/-6°,12°(B); +/-10°, 20°, 30° (C, PW)

- Depth:1.5 -28cm
- Physical Footprint: 45.7mm × 10.9mm
- Footprint: 43mm × 10mm
- B-mode Frequencies: 3.6~9.6, 5.4~11.5, 6.6~13.5MHz
- Harmonic Frequencies: 8.0, 9.0, 10.0MHz
- Doppler Frequencies: 4.4, 5.0, 5.7MHz
- Biopsy Guide: NGB-007, multi angle, reusable

- L14-6NE
  - Application: Small organ, Musculo-skeletal, Nerve, Vascular, Orthopedics, Pediatric
  - Bandwidth: 5.4~16MHz(-20dB)
  - Number of Elements: 192
  - Field of View (max): 38.1mm
  - Steered Angle: +/-6°,12°(B); +/-10°, 20°, 30° (C, PW)
  - Depth: 1.5-28cm
  - Physical Footprint: 45.7mm × 10.9mm
  - Footprint: 44.2mm × 8.5mm
  - B-mode Frequencies: 5.4-11.6, 6.0-12.6, 6.6-16.0MHz
  - Harmonic Frequencies: 8.0, 10.0, 12.0MHz
  - Doppler Frequencies: 5.0, 5.7, 6.6MHz
  - Biopsy Guide: NGB-007, multi angle, reusable
- L9-3E
  - Application: Abdomen, Pediatric, Small Parts, Musculo-skeletal, Vascular, Nerve
  - Bandwidth: 1.8~9.8MHz(-20dB)
  - Number of Elements: 192
  - Field of View (max): 43.7mm
  - Steered Angle: +/-6°,12°(B); +/-10°, 20°, 30° (C, PW)
  - Depth: 1.5-28cm
  - Physical Footprint: 62mm × 22mm
  - Footprint: 48mm × 11mm
  - B-mode Frequencies: 1.8-7.0, 2.4-8.2, 3.6-9.8MHz
  - Harmonic Frequencies: 5.0, 6.0, 7.0MHz
  - Doppler Frequencies: 3.0, 3.6, 4.4MHz
  - Biopsy Guide: NGB-034, multi angle, reusable
- L14-6WE
  - Application: Musculoskeletal, nerve, small parts, vascular, pediatric
  - Bandwidth: 4.8~16MHz(-20dB)
  - Number of Elements: 256
  - Field of View (max): 5.1cm
  - Steered Angle: +/-6°,12°(B); +/-10°, 20°, 30° (C, PW)
  - Depth: 1.5-28cm
  - Physical Footprint: 59.1mm × 12mm
  - Footprint: 56.1mm × 10mm
  - B-mode Frequencies: 4.8-10.6, 5.4-11.6, 6.6-16.0MHz
  - Harmonic Frequencies: 8.0, 10.0, 12.0MHz
  - Doppler Frequencies: 5.0, 5.7, 6.6MHz
  - Biopsy Guide: NGB-007, multi angle, reusable
- L13-3
  - Application: Musculoskeletal, nerve, small parts, vascular, pediatric, abdomen
  - Bandwidth: 3.6~13.5MHz(-20dB)
  - Number of Elements: 128
  - Field of View (max): 3.8cm
  - Steered Angle: +/-6°,12°(B); +/-5°, 10°, 15° (C); +/-10°, 20°, 30° (PW)
  - Depth: 1.5-28cm
  - Physical Footprint: 45.7mm × 10.9mm
  - Footprint: 44.2mm × 8.5mm
  - B-mode Frequencies: 3.6-9.6,

5.4-11.5, 6.6-13.5MHz
- Harmonic Frequencies: 8.0, 9.0, 10.0MHz
- Doppler Frequencies: 4.0, 5.0, 6.2MHz
- Biopsy Guide: NGB-007, multi angle, reusable

9.3 Volume curved array

- D7-2E
  - Application: OB/GYN, Abdomen
  - Bandwidth: 2.6-8.2MHz(-20dB)
  - Number of Elements: 128
  - FOV (max): 70°(B) × 70°(sweep)
  - Extended FOV: 110°(B)
  - Convex Radius: 40mm
  - Volume Sweep Radius: 21mm
  - Depth: 4~40cm
  - Physical Footprint: 74mm × 49mm
  - Footprint: 49mm × 14.15mm
  - B-mode Frequencies: 2.6-4.8, 3.6-6.4, 3.8-8.2MHz
  - Harmonic Frequencies: 4.5, 6.0, 6.5MHz
  - Doppler Frequencies: 2.5, 3.0, 4.0MHz
  - Biopsy Guide: not available
- DE10-3E
  - Application: GYN, OB
  - Bandwidth: 2.6-12.8MHz(-20dB)
  - Number of Elements: 192
  - FOV (max): 155°(B)
  - Extended FOV: 195°(B)
  - Convex Radius: 10.0mm
  - Volume Sweep Radius: 10.8mm
  - Depth: 1.5~28cm
  - Physical Footprint: Diameter 25.0mm
  - B-mode Frequencies: 2.6-6.5, 3.2-7.9, 4.7-12.8MHz
  - Harmonic Frequencies: 7.0, 8.0, 9.0MHz
  - Doppler Frequencies: 4.4, 5.0, 5.7MHz
  - Biopsy Guide: NGB-021, multi angle, reusable

9.4 Pencil Probe

- CW2s
  - Application: Vascular, Cardiac, Cephalic, Pediatric
  - Number of Elements: 2
  - CW Frequency: 2.0MHz
  - Biopsy Guide: not available
- CW5s
  - Application: Vascular
  - Number of Elements: 2
  - CW Frequency: 5.0MHz
  - Biopsy Guide: not available

9.5 Phased array

- P4-2
  - Application: Cardiac, Abdominal, Pediatric, Transcranial
  - Bandwidth : 1.3-4.6MHz(-20dB)
  - Number of Elements: 64
  - Field of View (max): 90°
  - Depth: 3-32cm
  - Physical Footprint: 25.2mm × 20.6 mm
  - Footprint: 23.4mm × 15.2mm
  - B-mode Frequencies: 1.3-3.2, 1.6-3.8, 1.9-4.6MHz
  - Harmonic Frequencies: 3.4, 3.8, 4.2MHz
  - Doppler Frequencies: 2.0, 2.3, 2.6MHz; TDI 2.5, 4.0MHz
  - CW Frequency: 2.0MHz
  - Biopsy Guide: NGB-011, multi angle, reusable
- P7-3
  - Application: Cardiac, Abdominal, Cephalic, Pediatric
  - Bandwidth : 2.3-7.2MHz(-20dB)
  - Number of Elements: 96
  - Field of View (max): 90°
  - Depth: 2-31cm
  - Physical Footprint: 34mm ×24.5mm
  - Footprint: 20.4mm ×12.8mm
  - B-mode Frequencies: 2.3-5.4, 2.8-6.4, 3.3-7.2MHz

- Harmonic Frequencies: 6.0, 6.5, 7.0MHz
- Doppler Frequencies: 2.7, 3.3, 4.0MHz; TDI 5.0, 6.2MHz
- CW Frequency: 2.5MHz
- Biopsy Guide: not available

- P10-4E
  - Application: Abdomen, cardiac, pediatric, nerve
  - Bandwidth : 3.0-11.4MHz(-20dB)
  - Number of Elements: 128
  - Field of View (max): 90°
  - Depth: 2-16.5cm
  - Physical Footprint: 15.1mm ×10.2mm
  - Footprint: 15mm ×9.1mm
  - B-mode Frequencies: 3.0-6.8, 3.8-10.2, 4.6-11.4MHz
  - Harmonic Frequencies: 7.5, 8.0, 9.0MHz
  - Doppler Frequencies: 4.4, 5.0, 5.7MHz; TDI 5.7, 6.2MHz
  - CW Frequency: 5.0MHz
  - Biopsy Guide: not available

10 Peripheral Devices and Accessories (Option)

10.1 Black/white video printer

- MITSUBISHI P95DW-N, SONY UP-D898MD, SONY UP-X898MD, MITSUBISHI P93W-Z

10.2 Color digital printer

- SONY UP-D25MD

10.3 Graph/text printer

10.4 HP OFFICEJET PRO 8100Microphone

- SOMIC

10.5 Gel warmer

- Easily be disassembled off system for cleaning
- Temperature: 36°C ± 2°C
- Light indicator for temperature protecting
- Switch: on/off
- Dimension: 80mm (W) × 85mm (D) × 150mm (H) (145mm in depth)
- Weight: approx. 500g

10.6 Footswitch

- USB port: 971-SWNOM (2-pedal)
- USB port: 971-SWNOM (3-pedal)
- FS-81-SP-2 (1-pedal)
- Support User-definable functions (Freeze, Save, Print)

10.7 ECG

- 6-pin, AHA/IEC, for 3-lead wires
- ECG wave display: on/off
- Gain: 0-30, 1/step
- Sweep speed: 1-6, 1/step

10.8 Barcode reader

- Laser barcode scanner
- Model: SYMBOL LS2208, DS4308

10.9 Built-in Wireless adapter

- Encryption: WEP, WPA-PSK, WPA2-PSK
- Max transfer speed: 300Mbps
- Protocols: 802.11b: 11,5.5,2,1 Mbps; 802.11g: 54,48,36,24,18,12,9,6 Mbps; 802.11n: up to 300Mbps

10.10 Built-in Battery

- Replaceable and rechargeable lithium battery
- Restore from standby mode：less than 7s
- Full battery lasts more than 24h in standby mode
- Light indicator for standby mode
- Empty battery recharged to full in less than 4h
- Li-ion 14.8V 3000mAh LI24I001A 04A9009
- 14.8V * 3Ah < 100Wh

11 System Inputs and Outputs

11.1 Video/Audio input

- Microphone: 1 port

11.2 Video/Audio output

- S-Video out: 1 port, PAL/NTSC

- HDMI: 1 Port
- VGA out: 1 port
- Audio out: 1 port

11.3 Physio input

- Support ECG signal
- ECG: 1 port
- PCG: 1 port (reserved)

11.4 Other input/output

- USB: 5 USB 3.0 ports, 1 more dedicated USB port for printer
- Ethernet: 1 port

12 Safety and Conformance

12.1 Quality standards

- ISO 9001
- ISO 13485

12.2 Design standards

- 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

This system 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 II excluding (4). of the Directive.

NOTICE:

Not all features or specifications described in this document may be available in all probes 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