

Color Doppler Ultrasound Diagnostic system Technical Specification

Release version: V 3.0

1 System Overview

1.1 Clinical Applications

- Abdomen
- Obstetrics
- Gynecology
- Urology
- Cardiology
- Small Parts
- Blood Vessel
- Superficial
- Orthopedic
- MSK
- Nerve
- Pediatrics
- TCI
- Lung
- Pelvic Floor
- Custom

1.2 Transducer Types

- Convex transducer
- Micro-convex transducer
- Linear array transducer
- Phased array transducer
- Trans-vaginal transducer
- 4D volume transducer

1.3 Imaging modes

- B-Mode
- B steer
- 2B/4B-Mode
- CDFI-Mode
- M-Mode
- B/M-Mode
- CM-Mode
- Anatomic M Mode

- PDI Mode
- DPDI Mode
- PW-Mode
- CW-Mode
- Panoramic
- Color Panoramic
- Elastic Imaging
- Trapezoidal(Linear array probe)
- Extended Imaging(EFOV)
- TDI(TVI,TVD,TVM,TEI)
- 3D/4D Mode

1.4 Standard features

- 15.6" high resolution monitor
- Archive Management
- Raw Data
- Imaging Postprocessing
- Imaging Preprocessing
- B-Mode
- B steer
- 2B/4B-Mode
- CDFI-Mode
- M-Mode
- B/M-Mode
- CM-Mode
- Anatomic M Mode
- PDI Mode
- DPDI Mode
- HR Flow
- zMicroFlow
- PW-Mode
- CW-Mode
- Trapezoidal(Linear array probe)
- Extended imaging(EFOV)
- Auto Merge
- TDI(TVI,TVD,TVM,TEI)
- Tissue Specific Imaging(TSI)
- Tissue Harmonic Imaging(THI)
- Spatial Composite Imaging(SCI)
- Frequency Composite Imaging(FCI)
- B/C/D Chromatic Imaging
- Dual Live
- Pan Zoom
- Local Zoom
- Measurement magnification
- Auto Optimization

- Image Rotation
- Auto Calculate
- Auto IMT
- Puncture Enhancement
- Velocity Tag
- HPRF
- ZClear
- DICOM
- STIC(Spatio-Temporal Image Correlation)

1.5 Optional features

- 3D
- 4D
- Panoramic
- Elastic Imaging
- DICOM
- ZLive
- Silhouette
- Zonnet Imaging

1.6 Data Management

- Data Storage
 - ❖ Image Data: RAW /DICOM format
- Send Data
 - ❖ Image Format:RAW,JPG,DCM, BMP,TIFF,RAW 8bit
 - ❖ Video Format:AVI,MP4
 - ❖ DICOM Format:DCM
 - ❖ Report Format: PDF
 - Support hiding patient information: All,Name
- Data backup
 - ❖ Support backup of patient data to USB/CD-ROM (CDFS format) storage devices
 - ❖ Support recovering data from USB/CD-ROM (CDFS format) storage devices to the device
 - ❖ Support hiding patient information: All,Name
- Data Restoration

- ❖ Support restoring deleted data from the Recycle Bin
- Data Sharing
 - ❖ WiFi transmission
 - Support sharing pictures, videos, and reports to mobile devices
 - Support online zooming and viewing of pictures
 - Support online full-screen video viewing
 - Support single file download or package download
 - ❖ Bluetooth transmission
 - Support sharing pictures and reports to mobile devices
 - ❖ LAN to PC
 - Support transferring pictures, videos and reports to computer
 - Support one-click transfer of pictures and videos to computer

1.7 Connectivity

- Support wired network connection
- Support wireless network connection
- Support Bluetooth connection
- Support DICOM 3.0
- Remote teleconsultations
 - ❖ Support ultrasound devices to Directly initiate remote teleconsultations
 - ❖ Support remote reverse control of ultrasonic parameters
 - ❖ Support ultrasound live teaching and multiple people online viewing
 - ❖ Support screen sharing

2 Physical Specification

2.1 Dimension and weight

- Width:380.0mm
- Technical Specifications

- Height:360.0mm
- Thickness:125.0mm
- Weight:approx 6.45kg (without battery)

2.2 Monitor

- 15.6" high resolution color display screen
- Resolution:1920×1080
- Tilt angle range:0-75° (U/D)

2.3 Transducer ports and holders

- 3 activated transducer ports
- 3 removable transducer holders

2.4 Main body

- 1TB HDD
- Operating system :Linux

2.5 Electrical power

- AC adapter Input
 - ❖ Voltage:100V-240V
 - ❖ Frequency:50Hz/60Hz
 - ❖ Power Consumption:150VA
 - ❖ Input power:100-240V,1.7-0.7A
 - ❖ Battery Specification:14.4V/6500mAh

2.6 Operation Environment

- Ambient temperature:5℃-40℃
- Relative humidity:25%-85%
- Atmospheric pressure:800hPa-1060hPa

2.7 Storage &Transport Environment

- Ambient temperature: -20℃-55℃
- Relative humidity:10%-95%
- Atmospheric pressure:800hPa-1060hPa

3 User Interface

3.1 Monitor information

- Common info:
 - ❖ Logo
 - ❖ Hospital Name
 - ❖ Patient Name, Age, Gender
 - ❖ System Data & Time
 - ❖ Acoustic Power
 - ❖ MI
 - ❖ TIS
 - ❖ TIB
 - ❖ TIC

- ❖ Transducer Type

- ❖ Exam Mode

● Image region:

- ❖ Image
- ❖ Transducer Mark
- ❖ Parallel scale & Vertical scale
- ❖ Focus Position
- ❖ Depth
- ❖ Gray Bar/Color Bar
- ❖ Playback progress bar
- ❖ Measurement result box
- ❖ Freeze Mark
- ❖ Prompt bar
- ❖ Battery level
- ❖ Power Status

● Multifunction Menu Area

-Corresponding information will be displayed when entering the functions of text annotation, arrow annotation, body marker and measurement.

● Image parameters area

● Clipboard

- ❖ Thumbnail
 - Send
 - Delete
- ❖ Page up and down

● Status bar

- ❖ Network connection status
- ❖ Input method
- ❖ Store status
- ❖ Recycle bin con
- ❖ Task manager
- ❖ Other

3.2 Control panel

- Panel key backlight design:
 - 0-9 adjustable
- Power On/Off
- Imaging Mode Buttons
 - ❖ B,C,PW,M,CW,PDI,TDI,3D/4D
- Parameter shortcut keys
 - ❖ Auto
 - ❖ Angle/Steer
 - ❖ Depth
 - ❖ Focus
 - ❖ Baseline
 - ❖ Scale
 - ❖ Zoom
- User-defined programming key
 - ❖ Q1-Q4
 - ❖ Save1,Save2
 - ❖ Print
- Freeze button
- Function
 - ❖ Probe
 - ❖ Patient
 - ❖ Report
 - ❖ Review
 - ❖ End Exam
 - ❖ Station
 - ❖ Setup
 - ❖ Biopsy
 - ❖ QSave
 - ❖ Text
 - ❖ Body Mark
 - ❖ Arrow
 - ❖ Caliper
 - ❖ Measurement
 - ❖ Update
 - ❖ Dual
 - ❖ Cursor
 - ❖ Clear
- 8-segment TGC control
- Trackball
- Keyboard
- Button volume and trackball sensitivity are adjustable.

- Indicator light
 - ❖ External power indicator
 - ❖ Battery status indicator
 - ❖ Hard disk operating indicator

3.3 System boot-up

- Boot-up in about 65s
- Shut down in about 8s
- Screen saver:Off,1,10,30,60min

3.4 Text

- Comment Language
 - ❖ English,中文,Espeña,Français,русский язык,Deutsch,Polksi,Italiano,Português,Român
- Annotation term library: optional
- Font size: Large, Medium, Small
- Support hide/show comments
- Support custom comments
- Brush: On, Off

3.5 Arrow

- Arrow size: large, medium, small
- Arrow direction: 360° adjustable
- Support hide/show arrows

3.6 Body Marks

- More than 145 body-marks
- Support probe marking, direction adjustable
- Position: adjustable
- Custom Additions

4 Imaging Parameters

4.1 Overview

- Digital beamformers
- Multiplex signal parallel processing technology
- Digital whole dynamic focus
- Digital variable aperture and dynamic accretion technology
- A/D: 14bit

4.2 B mode

- 2D Grayscale:256
- Display Format:
 - B(Single),2B(Dual),4B(Quad)
- B steer:
 - ❖ For linear array probe
 - ❖ Left 4 steps adjustable

- ❖ Right 4 steps adjustable
- ❖ -16° $-+16^{\circ}$, 4° /step
- Gain:0-100dB,1/step
- Image Quality:Pen,Gen,Res,
HPen,HPen-Gen,HGen,HRes
- Dyn Ra(Dynamic range):
30-180dB,5/step
- ZClear:0-6,1/step
- Persistence:0-6,1/step
- Gray Map:1-10,1/step
- Chroma:0-8,1/step
- Field of View:1-8,1/step
- EFOV:
 - ❖ Phased array probe don't support
 - ❖ 0,1,2 Adjustable
- U/D Reverse:On/Off
- Dual Live
- SCI:0-7,1/step
- Line Density:
 - L,M,H,UH
- A.Power:1-20,1/step
- Rotation:0°,90°,180°, 270°
- L/R Reverse:On/Off
- Focus
 - Focus number:Up to 8(SCI Turn Off)
 - Focus location: 15
- FCI:0,1
- TSI:General,Muscle,Fat,Fluid
- Auto Merge
- Center line
- Center Point
- TGC: 8 segment
- Depth:420mm
- Pan Zoom:Z0.8, Z0.9, Z1.1, Z1.2,
Z1.4,Z1.6, Z1.8, Z2.0, Z3.0, Z4.0,
Z5.0, Z6.0, Z7.0, Z8.0, Z9.0, Z10
- Local Zoom:17 levels adjustable
- Maximum frame rate:219(3P2PA)

4.3 M mode

- Display Format:
 - Full,V2:3,V3:2,V3:1,H2:3
- Gain:0-100dB, 1/step
- Dyn Ra:30-180, 5/step

- Speed:1-8,1/step
- Gray Map:1-10, 1/step
- Chroma:0-8, 1/step

4.4 C Mode

- Display Format:
 - C(single)
 - 2C(Dual)
 - 4C(Quad)
 - B+C(Dual Live)
- Gain:0-100dB,1/step
- Image Quality:Pen,Gen,Res
- Scale:0-19,1/step
- Wall Filter:8 levels,1/step
- Sensitivity:1-4,1/step
- Persistence:0-5,1/step
- Smooth:0-5,1/step
- Dual Live
- Line Density:
 - L,M,H,UH
- Flow State:L,M,H
- HR Flow:On/Off
- Priority:0-100,1/step
- Invert:On/Off
- Velocity Tag:On/Off
- B/C Align:On/Off
- Color Hide:On/Off
- Color Map:
 - ❖ V0-V10(Velocity type)
 - ❖ VV0-VV9(Velocity variance type)
- Auto Invert:On/Off(Linear array probe)
- ROI steer: -28° -28° ,7/step
- ROI rapid steer: -28° $\sim 28^{\circ}$,7/step
- ROI Position:Trackball
- ROI Size:Trackball,Set button
- ROI Steer:
 - ❖ For linear array probe
 - ❖ Left 4 steps adjustable
 - ❖ Right 4 steps adjustable
- Maximum frame rate:173 (3P2PA)

4.5 PDI /DPDI Mode

- Display Format:
 - Single
 - Dual

- Quad
- Dual Live (B+PDI、B+DPDI)

- Gain:0-100dB,1/step
- Image Quality:Pen,Gen,Res
- Scale:0-19,1/step
- Wall Filter:8 levels,1/step
- Sensitivity:1-4,1/step
- Persistence:0-5,1/step
- Smooth:0-5,1/step
- Dual Live
- Line Density:
L,M,H,UH
- Flow State:L,M,H
- zMicroFlow:On/Off
- Priority:0-100,1/step
- Invert(DPDI)
- Dyn Ra:10-70,5/step
- B/C Align:On/Off
- Color Hide:On/Off
- Color Map:
 - ❖ P0-P3(Energy pattern)
 - ❖ dP0-dP3(Directional energy pattern)

4.6 PW Mode

- Gain:0-100dB,1/step
- Baseline:-8—+8,1/step
- Image Quality:Pen,Gen,Res
- Scale:0-19,1/step
- Wall Filter:8 levels,1/step
- Invert:On/Off
- Quick Angle:0° , +60° , -60°
- Angle:-80° -80° , 5/step
- Speed:1-8,1/step
- Display Format:
Full,V2:3,V3:2,V3:1,H2:3
- Auto Invert:On/Off(Linear array probe)
- Trace Area:Above,Below,All
- SV:0.5-80mm,0.5mm/step
- HPRF:On/Off
- Volume:0-100,1/step
- Dyn Ra:24-72,2/step
- Multi sync:On/Off
- Auto Calc:On/Off
- Auto Calc Cycle:1,2,3

- Auto Calc Para:
 - ❖ AT,D/S,DT,ED,Flow(TAMAX),Flow(TAMEAN),HR,MD,MMPG,MPG,PI,PPG,PS,PV,RI,S/D,TAMAX,TAMEAN,VTI
- Chroma:0-8,1/step
- Gray Map:1-10,1/step
- T/F Resolution:1-5,1/step

4.7 CW Mode

- Gain:0-100dB,1/step
- Baseline:-8—+8,1/step
- Image Quality:Pen,Gen
- Scale:0-19,1/step
- Wall Filter:8 levels,1/step
- Invert:On/Off
- Speed:1-8,1/step
- Quick Angle:0° , +60° , -60°
- Angle:-80° -80° , 1/step
- Display Format:
Full,V2:3,V3:2,V3:1,H2:3
- Trace Area:Above,Below,All
- Dyn Ra:24-72,2/step
- T/F Resolution:1-5,1/step
- Volume:0-100,1/step
- Chroma:0-8,1/step
- Gray Map:1-10,1/step
- Auto Calc: On/Off
- Auto Calc Cycle:1,2,3
- Auto Calc Para:
 - ❖ AT,D/S,DT,ED,Flow(TAMAX),Flow(TAMEAN),HR,MD,MMPG,MPG,PI,PPG,PS,PV,RI,S/D,TAMAX,TAMEAN,VTI

4.8 Anatomic M Mode(AMM)

- Show A
- Show B
- Show C
- Sampling line position: adjustable
- Sampling line direction: 0-180° rotation
- Speed:1-8,1/step
- Gray Map:1-10,1/step
- Chroma:0-8,1/step
- Display Format:V2:3、H2:3

4.9 Curved Anatomic M Mode

- One curve sampling line is supported

- Sampling point position: adjustable
- Edit, Delete, Revoke
- Speed:1-8,1/step
- Gray Map:1-10,1/step
- Chroma:0-8,1/step

4.10 TDI Mode(Phased array probe)

- TVI:
 - ❖ Gain:0-100dB,1/step
 - ❖ Image Quality:Pen,Gen,Res
 - ❖ Scale:0-19,1/step
 - ❖ Wall Filter:8 levels,1/step
 - ❖ Sensitivity:1-4,1/step
 - ❖ Persistence:0-5,1/step
 - ❖ Smooth:0-5,1/step
 - ❖ Dual Live
 - ❖ Line Density:
L,M,H,UH
 - ❖ Flow State:L,M,H
 - ❖ Priority:0-100,1/step
 - ❖ Invert:On/Off
 - ❖ B/C Align:On/Off
 - ❖ Color Hide:On/Off
 - ❖ Color Map:V0-V9
 - ❖ Acoustic power: 1-20,1/step
- TVD
 - ❖ Gain:0-100dB,1/step
 - ❖ Image Quality:Pen,Gen,Res
 - ❖ Wall Filter:8 levels,1/step
 - ❖ Invert:On/Off
 - ❖ Quick Angle:0° , +60° , -60°
 - ❖ Angle:-80° -80° , 1/step
 - ❖ Auto Calc: On/Off
 - ❖ Auto Calc Cycle:1,2,3
 - ❖ Auto Calc Para:
AT,D/S,DT,ED,Flow(TAMAX),Flow(TA
MEAN),HR,MD,MMPG,MPG,PI,PPG,
PS,PV,RI,S/D,TAMAX,TAMEAN,VTI
 - ❖ Speed:1-8,1/step
 - ❖ Baseline:-8—+8,1/step
 - ❖ Display Format:
Full,V2:3,V3:2,V3:1,H2:3
 - ❖ Trace Area:Above,Below,All
 - ❖ SV:0.5-80mm,0.5mm/step

- ❖ HPRF:On/Off
- ❖ Volume:0-100,1/step
- ❖ Dyn Ra:24-72,2/step
- ❖ Multi Sync:On/Off
- ❖ Chroma:0-8,1/step
- ❖ Gray Map:1-10,1/step
- ❖ T/F Resolution:1-5,1/step
- ❖ Acoustic power: 1-20,1/step

- TEI
 - ❖ Gain:0-100dB,1/step
 - ❖ Image Quality:Pen,Gen,Res
 - ❖ Scale:0-17,1/step
 - ❖ Wall Filter:8 levels,1/step
 - ❖ Sensitivity:1-4,1/step
 - ❖ Persistence:0-5,1/step
 - ❖ Smooth:0-5,1/step
 - ❖ Dual Live
 - ❖ Line Density:
L,M,H,UH
 - ❖ Flow State:L,M,H
 - ❖ Priority:0-100,1/step
 - ❖ Dyn Ra:10-70,5/step
 - ❖ B/C Align:On/Off
 - ❖ Color Hide:On/Off
 - ❖ Color Map:
P0-P3(Energy pattern)
dP0-dP3(Directional energy pattern)
 - ❖ Acoustic power: 1-20,1/step

- TVM:
 - ❖ Gain:0-100dB,1/step
 - ❖ Dyn Ra:30-180,5/step
 - ❖ Speed:1-8,1/step
 - ❖ Gray Map:1-10,1/step
 - ❖ Chroma:0-8,1/step
 - ❖ Display Format:
Full,V2:3,V3:2,V3:1,H2:3

4.11 Static 3D&4D

- Prepare Mode
 - ❖ Auto face(VR)
 - ❖ Trim Used:On/Off
 - ❖ Surface,Depth,Max,Min,X-Ray,ZLive,
Silhouette
- STIC

- ❖ Support 4V4CDS probe
- ❖ Acquisition time:7.5s、 10s、 12.5s、 15s、 17.5s
- ❖ Estimated Fetal Heart Rate (FHR)
- ❖ Review
- ❖ Support ZPage
- ❖ Support Layout
- Prepare Parameters
 - ❖ Quality:Lowest,Low,Medium,High, Highest
 - ❖ Angle:10° —70° , 5° /step
- Update Parameters
- Display Format
 - ❖ Single
 - ❖ Dual
 - ❖ Quad
 - ❖ Left Quad
 - ❖ Render Mode:Surface,Depth,Max,Min, X-Ray,ZLive,Silhouette
- Orientation:0° 、 90° 、 180° 、 270°
- Axial Rotation:X,Y,Z
- Threshold:0-100,1/step
- Opacity:0-100,5/step
- Contrast:0-100,1/step
- Brightness:0-100,1/step
- Smooth:0-12,1/step
- Image Selection:A/B/C/VR
- MPR
- VR
- Reset Ori
- Reset All
- Sync:On/Off
- Chroma:0-8,1/step
- Image Enhancement:0-10,1/step
- Reset Trim
- Invert
- View Direction
 - ❖ UP To Down
 - ❖ Down To UP
 - ❖ Left To Right
 - ❖ Right To Left
 - ❖ Front To Back
 - ❖ Back To Front

- Reverse View
- Gary Map:1-10,1/step(MPR)
- Move Light(ZLive Mode)
- Image Edit parameters
 - ❖ Box In
 - ❖ Box Out
 - ❖ Contour In
 - ❖ Contour Out
 - ❖ Polygon In
 - ❖ Polygon Out
 - ❖ Undo
- Undo All
- ZPage
 - ❖ Slice 2×2
 - ❖ Slice 3×3
 - ❖ Slice 4×4
 - ❖ Slice 5×5
 - ❖ Distance:0.1-40,0.1/step
 - ❖ A/B/C/Slices Full
 - ❖ Axial Rotation:X,Y,Z
 - ❖ Slices Full: On/Off
 - ❖ Slice Pos:-12—12,1/step
 - ❖ Horizontal
 - ❖ Vertical
- Layout parameters
 - ❖ Niche
 - ❖ Front Back
 - ❖ Back Front
 - ❖ A/B/C/Niche
 - ❖ Reset Ori
- Auto Rotation
 - ❖ Start
 - ❖ One-Way
 - ❖ Two-Way
 - ❖ Left Right
 - ❖ Up Down
 - ❖ Speed:1-3,1/step
 - ❖ Step:1-6,1/step

4.12 Panoramic Imaging

- Support all probes
- Support B,C,PDI Mode
- Support collection and erasure
- Support Scan speed prompt box

- Support play back of captured images
- Support re-collection
- Support image size adjustment: fix, actual
- Zoom factor:0.1-10
- Rotation Angle:0° -355°
- Chroma:0-8,1/step
- Ruler:On/Off

4.13 Elasticity imaging

- Pressure indicator rod
- Compression curve
- Strain ratio measurement
- Opacity:0-10,1/step
- Invert:On/Off
- Sync(Synchronization):On/Off
- Persistence:0-5,1/step
- Smooth:0-6,1/step
- Map:1-7,1/step
- Support linear 、convex、
trans-vaginal probes

4.14 SCI

- Spatial Composite Imaging
- 0-7,1/step
- Paper clip test: > 9 threads
- Cannot be used with FCI or extended Imaging at the same time
- Phased array probe are not supported

4.15 FCI

- Frequency Composite Imaging
- 0,1
- Cannot be used with harmonic imaging and SCI at the same time

4.16 Auto

- Automatic optimization
- B Mode:Gain,Dynamic Range,TGC
- C Mode:Gain,Baseline
- PW Mode:Gain,Scale,Dynamic Range, Baseline

4.17 Zoom

- Support front-end amplification
- Support back-end amplification, multiple adjustment range:0.8-10,17 levels
- Support FZoom full screen magnification: Enlarge the normal image area to full screen

4.18 Puncture Guidance

- Puncture line calibration
- Single line/Double line
- Line type:Small,Medium,Large
- Position:Adjustable
- Rotation:Adjustable
- Don't support phased array probe, micro-convex probe,volume probe

4.19 Ultrasound Assistant

- Contains ultrasound image diagrams, operation method diagrams, operation instructions and clinical anatomy diagrams
- Supports single window zoom function
- More than 37
- Supported parts
 - ❖ Liver
 - ❖ Gall bladder
 - ❖ Spleen
 - ❖ Kidney
 - ❖ Pancreas
 - ❖ Carotid
 - ❖ Thyroid
 - ❖ Cardiac
 - ❖ Blood vessel:Vertebral artery, femoral vein, femoral artery, basilic vein, cephalic vein, ulnar artery, brachial artery, radial artery, subclavian artery, axillary artery, abdominal aorta, inferior vena cava, left renal artery
 - ❖ Breast
 - ❖ Cervical lymph nodes
 - ❖ Interscalene brachial plexus,
 - ❖ Supraclavicular brachial plexus,
 - ❖ Biceps brachii long axis tendon
 - ❖ Subscapularis tendon
 - ❖ Hip joint
 - ❖ A line
 - ❖ Pleural sliding sign
 - ❖ Prostate
 - ❖ Uterus
 - ❖ Ovary
 - ❖ Early pregnancy
 - ❖ Mid-late pregnancy (abdominal

circumference, femur, thalamus)

- ❖ Suprasternal fossa aortic arch
- ❖ Emergency FAST

4.20 Cineloop

- Available in all modes
- Supports frame by frame manual playback and automatic playback with adjustable speed
- Replay Speed(Freeze): OFF, $\times 1/10$, $\times 1/5$, $\times 1/4$, $\times 1/3$, $\times 1/2$, $\times 1$, $\times 2$, $\times 3$
- Start Frame(Freeze)
- End Frame(Freeze)
- Save(Freeze)
- Reset(Freeze)
- Jump to First(Freeze)
- Jump to Last(Freeze)
- Maximum number of playback frames

in two dimensions: 17339 frames

4.21 Raw data processing

- B mode
 - ❖ Gain
 - ❖ Dynamic Range
 - ❖ ZClear
 - ❖ Gray Map
 - ❖ Chroma
 - ❖ TGC
 - ❖ LGC
- M mode/TVM
 - ❖ Gain
 - ❖ Dynamic Range
 - ❖ Gray Map
 - ❖ Chroma
- C mode
 - ❖ Gain
 - ❖ Smooth
 - ❖ Priority
 - ❖ Color Map
 - ❖ Baseline
 - ❖ Invert
 - ❖ Velocity Tag
 - ❖ Color Hide
- PDI
 - ❖ Gain

- ❖ Smooth
- ❖ Priority
- ❖ Color Map
- ❖ Dynamic Range
- ❖ Color Hide

● PW/CW/TVD

- ❖ Gain
- ❖ Dynamic Range
- ❖ Gray Map
- ❖ Speed
- ❖ Chroma
- ❖ Baseline
- ❖ Quick Angle

● AMM

- ❖ Gray Map
- ❖ Chroma

● TVI/TEI

- ❖ Gain
- ❖ Smooth
- ❖ Priority
- ❖ Color Map
- ❖ Baseline
- ❖ Invert
- ❖ Color Hide

● Static 3D&4D

- ❖ Threshold
- ❖ Smooth
- ❖ Opacity
- ❖ Brightness
- ❖ Contrast
- ❖ Dynamic
- ❖ Chroma
- ❖ Gray map
- ❖ Image enhancement
- ❖ Render mode
 - Surface, Depth, Max, Min, X-ray, Zlive, Silhouette

● Panoramic Imaging

- ❖ Size
- ❖ Angle
- ❖ Chroma

● Elasticity imaging

- ❖ Smooth

- ❖ Opacity
- ❖ Graph

5 Measurement

5.1 2D Mode

- General

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

-Vas Area

-TAMEAN

-TAMAX

- Abdomen

- ❖ 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
- ❖ Aorta Diam
- ❖ Aorta Bif
- ❖ Iliac Diam
- ❖ Pre-BL L
- ❖ Pre-BL H
- ❖ Pre-BL W
- ❖ Post-BL L
- ❖ Post-BL H
- ❖ Post-BL W
- ❖ Ureter
- ❖ Renal Vol
- ❖ Pre-BL Vol
- ❖ Post-BL Vol
- ❖ Mictur.Vol

- Gynecology

- ❖ UT L
- ❖ UT H
- ❖ UT W
- ❖ Cervix L
- ❖ Cervix H
- ❖ Cervix W
- ❖ Endo
- ❖ Ovary L
- ❖ Ovary H
- ❖ Ovary W
- ❖ Follicle
- ❖ Auto Follicle
- ❖ Ovary Vol
- ❖ UT Vol
- ❖ UT SUM
- ❖ UT-L/CX-L

- ❖ BND
- ❖ DWT
- ❖ DWT1
- ❖ DWT2
- ❖ DWT3
- ❖ Mean DWT
- ❖ Residual Urine
 - BL Height
 - BL Depth
- ❖ BSD(R)
- ❖ UTA(R)
- ❖ RVA(R)
- ❖ BPW-SP Dist.(R)
- ❖ Cx-SP Dist.(R)
- ❖ RA-SP Dist.(R)
- ❖ Shuttle(R)
- ❖ ARA(R)
- ❖ LH AP Diam(R)
- ❖ LH Lateral Diam(R)
- ❖ LH Area(R)
- ❖ LA Thickness(R)
- ❖ LA Angle(R)
- ❖ LUG(R)
- ❖ BSD(Va)
- ❖ UTA(Va)
- ❖ RVA(Va)
- ❖ BPW-SP Dist.(Va)
- ❖ Cx-SP Dist.(Va)
- ❖ RA-SP Dist.(Va)
- ❖ Shuttle(Va)
- ❖ ARA(Va)
- ❖ LH AP Diam(Va)
- ❖ LH Lateral Diam(Va)
- ❖ LH Area(Va)
- ❖ LA Thickness(Va)
- ❖ LA Angle(Va)
- ❖ LA Thickness(C)
- ❖ LA Angle(C)
- ❖ LUG(C)
- ❖ IAS Damage
- ❖ EAS Damage
- Cardiology
 - ❖ Ao Diam(2D)
 - ❖ Ao Arch Diam(2D)
 - ❖ Ao Asc Diam(2D)
 - ❖ Ao Desc Diam(2D)
 - ❖ Ao Isthmus(2D)
 - ❖ Ao st junct(2D)
 - ❖ Ao Sinus Diam(2D)
 - ❖ AVA
 - ❖ ASD Diam
 - ❖ ACS(2D)
 - ❖ AV Diam
 - ❖ Duct Art Diam
 - ❖ HR(Cube 2D)
 - ❖ HR(Gibson 2D)
 - ❖ HR(Teich 2D)
 - ❖ IVC Diam(Expir)
 - ❖ IVC Diam(Insp)
 - ❖ IVSd(2D)
 - ❖ IVSs(2D)
 - ❖ LA Area
 - ❖ LA Diam(2D)
 - ❖ LA Major
 - ❖ LA Minor
 - ❖ LCA Diam
 - ❖ LPA Diam(2D)
 - ❖ LV Area(d)
 - ❖ LV Area(s)
 - ❖ Diastole(Cube 2D)
 - ❖ Diastole(Gibson 2D)
 - ❖ Diastole(Teich 2D)
 - ❖ LV Major
 - ❖ LV Minor
 - ❖ Systole(Cube 2D)
 - ❖ Systole(Gibson 2D)
 - ❖ Systole(Teich 2D)
 - ❖ LVIDd(2D)
 - ❖ LVIDd(Cube 2D)
 - ❖ LVIDd(Gibson 2D)
 - ❖ LVIDd(Teich 2D)
 - ❖ LVIDs(2D)
 - ❖ LVIDs(Cube 2D)
 - ❖ LVIDs(Gibson 2D)
 - ❖ LVIDs(Teich 2D)
 - ❖ LVOT Diam

- ❖ RVOT Diam
- ❖ LVPWd(2D)
- ❖ LVPWs(2D)
- ❖ MCS(2D)
- ❖ MPA Diam(2D)
- ❖ MVA
- ❖ MV Diam
- ❖ MV EPSS(2D)
- ❖ PDA Diam
- ❖ PEd(2D)
- ❖ PEs(2D)
- ❖ PFO Diam
- ❖ Pre Ductal
- ❖ Post Ductal
- ❖ PV Diam
- ❖ RA Area
- ❖ RA Major
- ❖ RA Minor
- ❖ RCA Diam
- ❖ RPA Diam(2D)
- ❖ RV Area(d)
- ❖ RV Area(s)
- ❖ RV Major
- ❖ RV Minor
- ❖ RVAWd(2D)
- ❖ RVAWs(2D)
- ❖ RVDd(2D)
- ❖ RVDs(2D)
- ❖ SVC Diam(Expir)
- ❖ SVC Diam(Insp)
- ❖ TV Diam
- ❖ TVA
- ❖ VSD Diam
- ❖ LVIDd(BP Ellipse)
- ❖ LVIDs(BP Ellipse)
- ❖ LVAd sax MV(BP Ellipse)
- ❖ LVAs sax MV(BP Ellipse)
- ❖ LVAd apical(BP Ellipse)
- ❖ LVAs apical(BP Ellipse)
- ❖ HR(BP Ellipse)
- ❖ LVAd sax MV(Bullet)
- ❖ LVAs sax MV(Bullet)
- ❖ LVLd apical(Bullet)
- ❖ LVLs apical(Bullet)
- ❖ HR(Bullet)
- ❖ LA Diam(LA Vol A-L)
- ❖ LAA(A2C)
- ❖ LAA(A4C)
- ❖ LA Vol(A2C)
- ❖ LA Vol(A4C)
- ❖ LVAd sax Epi(LV Mass A-L)
- ❖ LVAd sax Endo(LV Mass A-L)
- ❖ LVLd apical(LV Mass A-L)
- ❖ IVSd(LV Mass Cube-2D)
- ❖ LVIDd(LV Mass Cube-2D)
- ❖ LVPWd(LV Mass Cube-2D)
- ❖ LVAd sax Epi(LV Mass T-E)
- ❖ LVAd sax Endo(LV Mass T-E)
- ❖ a
- ❖ d
- ❖ RA Vol(A4C)
- ❖ LVLd apical(SP Ellipse)
- ❖ LVAd apical(SP Ellipse)
- ❖ LVLs apical(SP Ellipse)
- ❖ LVAs apical(SP Ellipse)
- ❖ HR(SP Ellipse)
- ❖ LVLd apical(Simp)
- ❖ LVLs apical(Simp)
- ❖ LVAd sax MV(Simp)
- ❖ LVAs sax MV(Simp)
- ❖ LVAd sax PM(Simp)
- ❖ LVAs sax PM(Simp)
- ❖ HR(Mod Simp)
- ❖ EDV(Simp BP-A2C)
- ❖ ESV(Simp BP-A2C)
- ❖ EDV(Simp BP-A4C)
- ❖ ESV(Simp BP-A4C)
- ❖ HR(Simp BP)
- ❖ EDV(Simp SP-A2C)
- ❖ ESV(Simp SP-A2C)
- ❖ HR(Simp SP A2C)
- ❖ EDV(Simp SP-A4C)
- ❖ ESV(Simp SP-A4C)
- ❖ HR(Simp SP A4C)
- ❖ LA/AO(2D)
- ❖ AO/LA(2D)

- ❖ Auto EF
- Vascular
 - ❖ Stenosis D
 - ❖ Stenosis A
- Urology
 - ❖ 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
 - ❖ 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 W
- ❖ Epididymis H
- ❖ Scrotal Wall
- ❖ Renal Vol
- ❖ Prostate Vol
- ❖ Testis Vol
- ❖ Pre-BL Vol
- ❖ Post-BL Vol
- ❖ Mictur.Vol
- Small Parts
 - ❖ Thyroid L
 - ❖ Thyroid H
 - ❖ Thyroid W
 - ❖ Isthmus H
 - ❖ Testicular L
 - ❖ Testicular H
 - ❖ Testicular W
 - ❖ 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 W
 - ❖ Epididymis H
 - ❖ Scrotal Wall
 - ❖ 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 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 Vol
- ❖ B distance
- ❖ Pleural T

- Orthopedics

- ❖ HIP
- ❖ HIP(α)
- ❖ HIP(β)
- ❖ HIP-Graf
- ❖ d/D

- Obstetrics

- ❖ GS
- ❖ YS
- ❖ CRL
- ❖ NT
- ❖ BPD
- ❖ OFD
- ❖ HC
- ❖ AC
- ❖ FL
- ❖ TAD
- ❖ APAD
- ❖ TCD
- ❖ CM
- ❖ LVW
- ❖ HW
- ❖ OOD
- ❖ IOD
- ❖ HUM
- ❖ UIna
- ❖ 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
- ❖ LA Area
- ❖ LV Area
- ❖ RV Area
- ❖ RA Area
- ❖ Ao Diam
- ❖ MPA Diam
- ❖ LVOT Diam
- ❖ RVOT Diam
- ❖ Facial Angle
- ❖ HrtA

- ❖ MV Diam
- ❖ PV Diam
- ❖ Ao Asc Diam
- ❖ Ao Desc Diam
- ❖ Duct Art Diam
- ❖ TV Diam
- ❖ LPA Diam
- ❖ RPA Diam
- ❖ IVC Diam
- ❖ AV Diam
- ❖ UT L
- ❖ UT H
- ❖ UT W
- ❖ Endo
- ❖ Mean Sac Diam
- ❖ AFI
- ❖ EFW
- ❖ EFW2
- ❖ HC/AC(Campbell)
- ❖ FL/AC
- ❖ FL/BPD
- ❖ AXT
- ❖ FL/HC(Hadlock)
- ❖ HC(C)
- ❖ HrtC/TC
- ❖ TCD/AC
- ❖ LVW/HW
- ❖ LVD/RVD
- ❖ LAD/RAD
- ❖ AoD/MPAD
- ❖ LAD/AoD
- Emergency
- ❖ Renal L
- ❖ Renal H
- ❖ Renal W
- ❖ CBD
- ❖ Portal V Diam
- ❖ CHD
- ❖ GB wall th
- ❖ Aorta Diam
- ❖ Aorta Bif
- ❖ Ureter
- ❖ Pre-BL L

- ❖ Pre-BL H
- ❖ Pre-BL W
- ❖ Post-BLL
- ❖ Post-BL H
- ❖ Post-BL W
- ❖ GS
- ❖ YS
- ❖ CRL
- ❖ 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

5.2 M Mode

● General

- ❖ Distance(M)
- ❖ HR(M)
- ❖ Slope
- ❖ Time(M)
- ❖ Velocity

● Cardiology

- ❖ Ao Arch Diam(M)
- ❖ Ao Asc Diam(M)
- ❖ Ao Desc Diam(M)
- ❖ Ao Diam(M)
- ❖ Ao Isthmus(M)
- ❖ Ao st junct(M)
- ❖ Ao Sinus Diam(M)
- ❖ Ao st junct(M)
- ❖ ACS(M)
- ❖ HR(Cube M)
- ❖ HR(Gibson M)
- ❖ HR(Teich M)
- ❖ IVSd(M)

- ❖ IVSs(M)
- ❖ LA Diam(M)
- ❖ LPA Diam(M)
- ❖ Diastole(Cube M)
- ❖ Diastole(Gibson M)
- ❖ Diastole(Teich M)
- ❖ Systole(Cube M)
- ❖ Systole(Gibson M)
- ❖ Systole(Teich M)
- ❖ LVET(M)
- ❖ LVIDd(Cube M)
- ❖ LVIDd(Gibson M)
- ❖ LVIDd(Teich M)
- ❖ LVIDd(M)
- ❖ LVIDs(M)
- ❖ LVIDs(Cube M)
- ❖ LVIDs(Gibson M)
- ❖ LVIDs(Teich M)
- ❖ LVPEP(M)
- ❖ LVPWd(M)
- ❖ LVPWs(M)
- ❖ MCS(M)
- ❖ MPA Diam(M)
- ❖ MV A Amp
- ❖ MV E Amp
- ❖ MV D-E Slope
- ❖ MV DE
- ❖ MV E-F Slope
- ❖ MV EPSS(M)
- ❖ PEd(M)
- ❖ PEs(M)
- ❖ RPA Diam(M)
- ❖ RVAWd(M)
- ❖ RVAWs(M)
- ❖ RVDd(M)
- ❖ RVDs(M)
- ❖ RVET(M)
- ❖ RVOT Diam
- ❖ RVPEP(M)
- ❖ TAPSE
- ❖ IVSd (LV Mass Cube-M)
- ❖ LVIDd (LV Mass Cube-M)
- ❖ LIPWd (LV Mass Cube-M)

- ❖ MV C-O dur
- ❖ LVET(LV Tei Index-M)
- ❖ LA/AO(M)
- ❖ AO/LA(M)
- ❖ IVC Diam(Insp M)
- ❖ IVC Diam(Expir M)
- ❖ SVC Diam(Insp M)
- ❖ SVC Diam(Expir M)

- Obstetrics

- ❖ FHR(M)
- ❖ LVIDd(M)
- ❖ LVIDs(M)
- ❖ RVIDd(M)
- ❖ RVIDs(M)
- ❖ IVSd(M)
- ❖ IVSs(M)

- Emergency

- ❖ FHR(M)

5.3 Doppler Mode

- General

- ❖ PS/ED
- ❖ Vel
- ❖ HR(Doppler)
- ❖ Time(Doppler)
- ❖ Acceleration
- ❖ D Trace
- ❖ Ratio(Vel)
- ❖ Ratio(VTI)
- ❖ Vol Flow
 - Vas Area
 - TAMEAN
 - TAMAX

- Abdomen

- ❖ Ren A Org
- ❖ Arcuate A
- ❖ Segment A
- ❖ Interlobar A
- ❖ Renal A
- ❖ M Renal A
- ❖ Renal V
- ❖ Aorta
- ❖ Celiac Axis
- ❖ SMA

- ❖ C Hepatic A
- ❖ Hepatic A
- ❖ Splenic A
- ❖ IVC
- ❖ Portal V
- ❖ M Portal V
- ❖ Hepatic V
- ❖ Lt Hepatic V
- ❖ Rt Hepatic V
- ❖ M Hepatic V
- ❖ Splenic V
- ❖ SMV
- ❖ RAR
- ❖ SMA/AO
- ❖ CA/AO

- Cardiology

- ❖ MV Aa(lateral)
- ❖ MV Aa(medial)
- ❖ AAo Vmax
- ❖ AV VTI
- ❖ 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 Pre-Duct
- ❖ Coarc Post-Duct
- ❖ DAo Vmax
- ❖ MV DRa(lateral)
- ❖ MV DRa(medial)
- ❖ MV Ea(lateral)
- ❖ MV Ea(medial)
- ❖ HR(Doppler)
- ❖ 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 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 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 Vmax
- ❖ VSD Vmax
- ❖ Hepatic V S Vel
- ❖ Hepatic V D Vel
- ❖ MV HR
- ❖ TV HR
- ❖ AV HR
- ❖ PV HR
- ❖ MV C-O dur(Doppler)
- ❖ LVET(LV Tei Index-Doppler)
- ❖ AR Rad
- ❖ AR Als Vel
- ❖ MR Rad
- ❖ MR Als Vel
- ❖ PR Rad
- ❖ PR Als Vel
- ❖ TR Rad
- ❖ TR Als Vel
- ❖ TV C-O dur
- ❖ RVET(RV Tei Index)
- ❖ MV E/A
- ❖ MVA(PHT)
- ❖ TV E/A
- ❖ TVA(PHT)
- Vascular
 - ❖ 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
- ❖ CFA
- ❖ SFA
- ❖ Pop A
- ❖ TP Trunk A
- ❖ Peroneal A
- ❖ P.Tib A
- ❖ A.Tib A
- ❖ Dors.Ped A
- ❖ C.Iliac V
- ❖ Ex.Iliac V
- ❖ Femoral V
- ❖ Saph V
- ❖ Pop V
- ❖ TP Trunk V
- ❖ Sural V
- ❖ Soleal V
- ❖ Peroneal V
- ❖ P.Tib V
- ❖ A.Tib V
- ❖ ACA
- ❖ MCA
- ❖ PCA
- ❖ AComA
- ❖ PComA
- ❖ BA
- ❖ IIA
- ❖ DFA
- ❖ Ba V
- ❖ Brachial V
- ❖ IIV

- ❖ CFV
- ❖ SFV
- ❖ DFV
- ❖ SSV
- ❖ ASP
- ❖ BSP
- ❖ ICA/CCA(PS)
- Urology
 - ❖ Testis A
 - ❖ Testis V
 - ❖ Epididymis A
 - ❖ Epididymis V
- Small Parts
 - ❖ STA
 - ❖ ITA
- Obstetrics
 - ❖ Umb A
 - ❖ Duct Venos
 - ❖ Placenta A
 - ❖ MCA
 - ❖ Fetal Ao
 - ❖ Desc Aorta
 - ❖ Ut A
 - ❖ Ovarian A
 - ❖ FHR(Doppler)
 - ❖ Asc Aorta
 - ❖ RVOT
 - ❖ LVOT

- Emergency
 - ❖ FHR(Doppler)

5.4 Automatic Measurement and Analysis

- Auto EF
 - ❖ Phased array probe support
 - ❖ Automatically identify the left ventricular endocardium
 - ❖ Automatic trace
 - ❖ Automatically calculate ejection fraction
 - ❖ Support manual adjustment
- Auto NT
 - ❖ Automatically identify the nuchal translucency and calculate its thickness
- Smart OB

- ❖ BPD
- ❖ OFD
- ❖ HC
- ❖ AC
- ❖ FL
- ❖ NT
- Auto Follicle
 - ❖ Support 2D automatic follicle measurement
- IMT
 - ❖ Automatically identify the intima-media membrane and calculate its thickness

5.5 Report

- Support adding multiple ultrasound images
- Reported measurements can be selected as recent, average, maximum, and minimum values; measurement values are editable
- Support quickly adding custom terms, templates, and measurement results
- Report display items are optional
 - Patient Information: Name, ID, DOB, Age, Gender, Clinician, Operator, Accession
- Exam Date
 - Measure
 - Analysis(OB)
 - Ultrasound Image
 - OB Graph(OB)
 - Compare Chart(OB)
 - Anatomy Images
 - Header
 - Footer
 - Page Number
 - Ultrasound Findings
 - Ultrasound Indication
 - Signature
 - Ultrasound Image Layout:
 - 1/Row, 2/Row
 - Anatomic Image Layout:
 - 1/Row, 2/Row
 - Font Size: 12-20
 - Font Weight: Normal, Bold
- Report can be generated/loaded
- Export: PDF format

- Support comparison of fetuses in multiple pregnancies
- Support switching gestational age calculation formulas

5.6 Exam Storage and Management

- Exam Storage
 - Hard Disk Capacity: 1TB
 - Support storing single frames and movie files of various digitized imaging modes
- Exam Management
 - Support querying patient exam information by "Name, DOB, Exam Time, Patient ID"
 - Support browsing and analyzing current and historical exams
 - Support creating, activating, pausing, resuming, deleting, and ending exams
 - Support recalling stored images and movies for measurement
 - Support importing, exporting, and sending exams
- Export format
 - JPG/AVI
 - BMP/AVI
 - TIFF/AVI
 - JPG/MP4
 - BMP/MP4
 - TIFF/MP4

6 System setup

6.1 System Preset

- Region
 - ❖ Hospital Info:
 - Name
 - Address
 - Telephone
 - Fax
 - Hospital icon
 - ❖ Language & Time:
 - Language:
 - English, 中文, España, Français, русский язык, Deutsch, Polski, Italiano, Português, Român

- Keyboard Layout
- Data&Time
- Time Zone
- Data Format:
 - yyyy-MM-dd
 - MM-dd-yyyy
 - dd-MM-yyyy
- Time Format:24 Hours,12 Hours
- General
 - ❖ Patient information
 - Display Item:ID,Name,Gender,Age,Operator,Hospital,DOB
 - Height and Weight unit:
 - Metric,British
 - Exam setting
 - Status after exam ends:
 - Scan,New Patient,Worklist
 - Send exam to DICOM after exam ends
 - ❖ System Screensaver
 - Screen saver:Waiting 1,10,30,60min
 - Show login box when exiting screensaver
 - Restore
 - Select picture
 - Preview
 - ❖ System Time
 - Display System Time
- Image
 - ❖ Image Storage
 - Cine Length(s):Adjustable
 - Cardiac Cycle:1-16
 - Image Size:Image Area,Standard Area
 - Video Output:PAL/NTSC
 - Standard/Image Area
 - AVI/MP4 Code
 - Image Quality:High,Medium,Low
 - ❖ Retrospective Cine Length
 - Time(Second):(1-120s)
 - Cardiac Cycle(1-120Cycles)
 - ❖ Prospective Cine Length
 - Time(Second):(1-480s)
 - Cardiac Cycle(1-390Cycles)
 - ❖ Image Setting
 - Default
 - Select default probe model
- Probe
 - TI Style:TIB,TIC,TIS
 - Freeze: Replay,Measure,Caliper
 - Steer:C&PW,C/PW
 - Auto Invert
 - Horizontal Ruler
 - Panoramic Ruler
 - Center Line
 - B+Color Refresh With PW
 - Sampling Line Movement
- Application
 - ❖ Measuring Cursor
 - Type:Number,Symbol
 - Size:Large,Medium,Small
 - Color(active):Green,Yellow,Red,White
 - Color(inactive):Green,Yellow,Red,White
 - Result Size:Super Large,Large,Medium,Small
 - Cardiac cycle:1-8
 - Delete measurement results When deleting calipers
 - ❖ Annotation
 - Font Size:Large,Medium,Small
 - Arrow Size:Large,Medium,Small
 - Automatically clear comments when unfreeze the image or switch the probe or exam mode
 - Automatically clear the body mark when unfreeze the image
 - ❖ Follicle
 - Calculation Method:
 - 1 distance,2 distance,3 distance
 - Automatic follicle display mode:
 - None,Contour,Filled
 - Display automatic follicle labeling
- OB
 - ❖ Fetal GA
 - Measurement Items
 - EFW—Hadlock,Tokyo
 - EFW2—Hadlock,Tokyo
 - GS—Rempen,Tokyo,Hansmann,China
 - CRL—Hadlock,Tokyo,Robinson,
 - Rempen,Hansmann,ASUM,Jeanty,

- Nelson,China,RobinsonBMUS
- BPD—Hadlock,Tokyo,Jeanty,Kurtz
- Hansmann,Merz,Rempen,ChittyOI,
- Osaka,China,Nicolaides,ASUM
- HC—Hadlock,Jeanty,Hansmann,
- ChittyPL,Chitty_Derived,
- Nicolaides,ASUM,CFEF
- AC—Hadlock,Jeanty,Merz,Chitty,
- Nicolaides,ASUM,CFEF,Hansman
- FL—Hadlock,Tokyo,Merz,
- Hansmann,Warda,Chitty,Osaka,
- Nicolaides,ASUM,Jeanty,Hohler,
- China
- OFD—Hansmann,Nicolaides,ASUM
- TAD—CFEF
- FTA—Osaka
- THD—Hansmann
- HUM—Jeanty,ASUM
- UIna—Jeanty
- Tibia—Jeanty
- CLAV—Yarkoni
- TCD—Hill,Nicolaides
- OOD—Jeanty
- Mean Sac Diam—Daya,Hellman
- Result window:
- Display EDD
- Display GA in the report
- ❖ Fetal Weight
- Fetal Weight 1:
- Hadlock(AC,FL)
- Hadlock(AC,FL,BPD)
- Hadlock(AC,FL,HC)
- Hadlock(AC,FL,HC,BPD)
- Shepard(AC,BPD)
- Merz1(AC,BPD)
- Merz2(AC)
- Hansmann(BPD,THD)
- Tokyo(BPD,APTD,TTD,FL)
- Osaka(FL,BPD,FTA)
- Campbell(AC)
- Fetal Weight 2:
- Hadlock(AC,FL)
- Hadlock(AC,FL,BPD)
- Hadlock(AC,FL,HC)
- Hadlock(AC,FL,HC,BPD)
- Shepard(AC,BPD)
- Merz1(AC,BPD)
- Merz2(AC)
- Hansmann(BPD,THD)
- Tokyo(BPD,APTD,TTD,FL)
- Osaka(FL,BPD,FTA)
- Campbell(AC)
- Weight Unit:METRIC,IMPERIAL,
- METRIC&IMPERIAL
- ❖ Fetal Weight Percentile
- Formula:NULL,Hadlock,Brenner,
- William
- Type:AUA/CUA,LMP&AUA/CUA,
- LMP
- Fetal Growth Curve
- Measurement Items:
- EFW—Hadlock,Hansmann,Tokyo,
- Brenner,William
- EFW2—Hadlock,Hansmann,Tokyo
- Brenner,William
- GS—Rempen,Tokyo,Hansmann,
- Hellman
- CRL—Hadlock,Tokyo,Robinson,
- Rempen,Hansmann,ASUM
- BPD—Hadlock,Tokyo,Jeanty,Kurtz
- Sabbagha,Hansmann,Merz,Rempen,
- ChittyOI,Osaka,Nicolaides,ASUM,
- CFEF
- HC—Hadlock,Merz,Hansmann,Jeanty,
- CFEF,ChittyPL,Chitty_Derived,
- Nicolaides,ASUM
- AC—Hadlock,Jeanty,Merz,Chitty,
- Nicolaides,ASUM,CFEF,Hansman
- FL—Hadlock,Tokyo,Merz,Hansmann,
- O_Brien,Warda,Chitty,Jeanty,
- Osaka,Nicolaides,ASUM,CFEF
- OFD—Hansmann,Merz,Nicolaides,
- ASUM,Jeanty
- APAD—Merz
- TAD—Merz,CFEF
- FTA—Osaka

THD—Hansmann
 HUM—ASUM,Jeanty,Merz
 UIna—Merz,Jeanty
 Tibia—Merz,Jeanty
 RAD—Merz,Jeanty
 FIB—Merz,Jeanty
 CLAV—Yarkoni
 TCD—Hill,Goldstein,Nicolaides
 CM—Nicolaides
 MCARI—JSUM
 UmbARI—JSUM
 AFI—Moore
 HC/AC—Champbell
 FL/HC—Hadlock
 —OB Graph:2×2,1×2,2×1,1×1

- Customize
 - ❖ Button Type:Button,Foot Switch
 - ❖ Button:Save1,Save2,Q1,Q2,Q3,Q4,Print
 - Output:Save Image,
 - Save Cine(Prospective)
 - Save Cine(Retrospective)
 - Save Cine and Send to Computer
 - Save Image and Send to Computer
 - Print:Analog Print,Digital Print
 - Image Mode:
 - Enter TDI Mode
 - Enter Elasto Mode
 - Enter Pano Mode
 - Enter Anatomic M Mode
 - Enter Dual Live Mode
 - Enter Quad Mode
 - Other
 - QSave
 - Freeze/Unfreeze
 - Ultrasound assistant
 - FZoom
 - Save Auto Calc Result
 - ❖ Trackball Speed:Slow,Medium,Fast
 - ❖ Button Brightness:0-9
 - ❖ Button Volume:On/Off

6.2 Exam Preset

- Available on all probes
- Add New Applications

- Delete Applications
- Set up Default Clinical App of boot
 - ❖ Quick Exam Mode sort by
 - Frequently used/Recently used

6.3 Annotation Preset

- Current Annotation Library
- Optional Annotation Library
 - ❖ ABD,OB,GYN,Cardiac,SMP,URO,VAS,PED,Nerve,EM
- Selected Annotation Library

6.4 Measure Preset

- Measure
 - ❖ Measure Package
 - ❖ Measure Sequence
 - ❖ 2D,M,Doppler
- Caliper
 - ❖ Measure Item adding/moving
 - ❖ 2D,M,Doppler
- Report
 - ❖ Preset Report Template Name

6.5 Network Preset

- Local TCP/IP
 - ❖ Connection method:
 - Wired connection/Wireless connection
 - ❖ Wired network
 - DHCP,Static
 - IP Address
 - Subnet Mask
 - Gateway
 - ❖ Wireless network
 - Auto Connect
- DICOM Local
 - ❖ Local host DICOM Service Property
 - AE Title,Port,PDU
 - ❖ Server Setting
 - Device,IP
 - ❖ Device list
 - Device,IP
 - ❖ Set DICOM Service>Delete
- DICOM Service
 - ❖ Storage
 - ❖ Print
 - ❖ Worklist

- ❖ MPPS
- ❖ Storage Commitment
- ❖ Query/Retrieve

6.6 Print Preset

- Print Service
 - ❖ Add Service
 - ❖ Delete Service
 - ❖ Rename
 - ❖ Add Printer
 - ❖ Default
- Printer Property
- Printing Parameter

6.7 About & Maintenance

- System Info
- Detailed Info
- Option
- Other

7 Probe Parameters

- Linear array probe 7L4PDS
 - ❖ Applications: Carotid, Thyroid, Nerve, Superficial, MSK, Ped ABD, Orthopedic, Vascular, Testicle, Lung
 - ❖ Bandwidth: 4.2-15.0MHz
 - ❖ Number of Elements: 128
 - ❖ Scan Range: 10-38mm
 - ❖ Extended Imaging: 20°
 - ❖ Basic Frequency: 4.2-6.3MHz, 6.0-9.5MHz, 8.5-15.0MHz
 - ❖ Harmonic Frequency: 8.0MHz, 9.4MHz, 10.6MHz, 12.2MHz
 - ❖ Color Frequency: 4.5MHz, 5.0MHz, 5.5MHz (HR Flow)
 - ❖ PW Frequency: 4.5MHz, 5.0MHz, 5.5MHz
 - ❖ Depth Range: 20-280mm
 - ❖ Puncture Holder (Optional): ZNG-08, 40°, 50°, 60°
- Convex probe 3C5PDS
 - ❖ Applications: ABD, OB, GYN, ABD Vascular Ped ABD, Urology, Pelvic Floor, Lung

- ❖ Bandwidth: 1.0-7.5MHz
- ❖ Number of Elements: 128
- ❖ Scan Range: 27° -72°
- ❖ Extended Imaging: 82°
- ❖ Radius of curvature: 50mm
- ❖ Basic Frequency: 1.0-3.0MHz, 2.6-4.5MHz, 4.2-7.5MHz
- ❖ Harmonic Frequency: 4.0MHz, 5.0MHz, 6.0MHz, 6.4MHz
- ❖ Color Frequency: 2.5MHz, 3.1MHz, 3.5MHz (HR Flow)
- ❖ PW Frequency: 2.5MHz, 3.1MHz, 3.5MHz
- ❖ Depth Range: 40-420mm
- ❖ Puncture Holder (Optional): ZNG-07, 20°, 30°, 40°

● Micro-convex probe 6C1PD

Applications: Cardiology, Ped ABD

- ❖ Bandwidth: 3.5-12.0MHz
- ❖ Number of Elements: 128
- ❖ Scan Range: 30° —95°
- ❖ Extended Imaging: 105°
- ❖ Radius of curvature: 15mm
- ❖ Basic Frequency: 3.5-6.3MHz, 6.0-7.5MHz, 6.8-12.0MHz
- ❖ Harmonic Frequency: 7.2MHz, 8.0MHz, 9.4MHz, 10.0MHz
- ❖ Color Frequency: 4.6MHz, 5.6MHz, 6.2MHz (HR Flow)
- ❖ PW Frequency: 4.6MHz, 5.6MHz, 6.2MHz
- ❖ Depth Range: 20-280mm

● Phased array probe 3P2PA

- ❖ Applications: Cardiology, Ped Abdomen
- ❖ Bandwidth: 1.0-6.5MHz
- ❖ Number of Elements: 64
- ❖ Scan Range: 29° -89°
- ❖ Basic Frequency: 1.0-2.6MHz, 2.4-3.8MHz, 3.5-6.5MHz
- ❖ Harmonic Frequency: 3.6MHz, 4.0MHz, 5.0MHz, 6.0MHz
- ❖ Color Frequency: 2.0MHz,

- ❖ 2.5MHz,3.2MHz(HR Flow)
- ❖ PW Frequency:2.0MHz,2.5MHz,3.2MHz
- ❖ CW Frequency:2.0MHz,3.3MHz
- ❖ Depth Range:30-320mm
- **Trans-vaginal probe 6E1PDS**
 - ❖ Applications:OB/GYN,Prostate,Pelvic Floor
 - ❖ Bandwidth:2.5-13.0MHz
 - ❖ Number of Elements:128
 - ❖ Scan Range:36° —150°
 - ❖ Extended Imaging:160°
 - ❖ Radius of curvature:10mm
 - ❖ Basic Frequency:2.5-5.5MHz,5.2-7.5MHz,6.8-13.0MHz
 - ❖ Harmonic Frequency:6.4MHz,7.2MHz,8.0MHz,10.0MHz
 - ❖ Color Frequency:4.6MHz,5.6MHz,6.2MHz(HR Flow)
 - ❖ PW Frequency:4.6MHz,5.6MHz,6.2MHz
 - ❖ Depth Range:20-280mm
 - ❖ Puncture Holder(Optional):ZNG-09, 0.8°
- **Volume probe 4V4CDS**
 - ❖ Applications:OB/GYN,Abdomen,Pelvic Floor
 - ❖ Bandwidth:1.6-8.0MHz
 - ❖ Number of Elements:128
 - ❖ Scan Range:26° —68°
 - ❖ Extended Imaging:78°
 - ❖ Basic Frequency:1.6-3.0MHz,2.8-4.5MHz,4.2-8.0MHz
 - ❖ Harmonic Frequency:5.0MHz,6.4MHz,7.2MHz,8.0MHz
 - ❖ Color Frequency:3.0MHz,4.0MHz,5.0MHz(HR Flow)
 - ❖ PW Frequency:3.0MHz,4.0MHz,5.0MHz
 - ❖ Depth Range:40-420mm

8 System Inputs&Outputs

- USB 3.0: 2
- USB 2.0: 1
- HDMI: 1
- Video: 1
- S-Video: 1
- Print: 1
- Network: 1
- AC IN: 1
- Ground pole: 1

9 Standard Package

- Main Unit
- Lithium Battery
- Power cord
- User Manual

10 Optional Accessories

- Transducers
- Thermal Printer
- Laser Printer
- Trolley
- Suitcase
- Biopsy kit
- Foot Switch
- Wi-Fi Adapter
- Bluetooth Adapter
- External Camera

11 Security and Authentication

11.1 Quality Certification

- Certified by NMPA
- 《Medical Device Good Manufacturing Practice》
(Medical Device GMP)

11.2 Applicable standards

- GB 9706.1-2020
- GB 9706.237-2020
- GB 10152-2009
- GB/T 14710-2009
- YY 9706.102-2021
- YY/T 0767-2023
- YY/T 1419-2016
- YY/T 1279-2015
- YY/T 1671-2020
- YY/T 1057-2016
- YY/T 1420-2016

NOTICE:

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

The above data was revised based on APP V1.0.8(r8660).

Zoncare reserves the right to make changes in specifications and features shown herein.

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