

Acclarix LX4

Diagnostic Ultrasound System

Version 1.0

Datasheet





Product Description

The Acclarix LX4 Ultrasound System features a host of design breakthroughs that make day-to-day operation easy, fast and intuitive. The Acclarix LX4 has been designed from the ground up with a relentless focus on delivering unexpected levels of innovation and performance at a price point that is equally surprising.

1. System Overview

1.1.Application

- Abdomen
- Gynecology
- Obstetrics
- Cardiology
- Small parts
- Urology
- Musculoskeletal
- Vascular
- Intra-operation
- Pediatric
- Neonatal
- Adult cephalic

1.2.Transducer Types

- Convex array
- Linear array
- Phased array
- Endocavity curved array
- Micro-Convex array
- Wobbler

1.3.Imaging Modes

- B-mode B
- M-mode M
 - Anatomic M Mode

- Color Doppler
- Power Doppler Imaging/Directional PDI
- Pulsed Wave Doppler
- Continuous Wave Doppler
- HPRF(High Pulse Repetition Frequency)
- Static 3D
- 4D
- TDI(including Color-TDI and PW-TDI)

1.4.ImagingTechnique&Function

- Tissue Adaptive Imaging
- Adaptive Doppler imaging
- Frequency Compounding Imaging
- Adaptive Spatial Compounding Imaging
- Harmonic Imaging
- Adaptive Speckle Reduction Imaging (eSRI)
- Spectrum Enhancement
- B mode Auto Optimization
- Color mode Auto Optimization
- PW mode Auto Optimization
- Digital Multi-Beam Beamforming
- Trapezoid Imaging for linear transducer
- B Steer
- Pan Zoom
- Panorama Imaging
- Needle Enhancement Visualization Imaging

1.5.Display Modes

- B
- Dual B
- Quad
- M
- B+M(Anatomic M)
- B/C(PDI, or DPDI)
- Dual B/C(PDI or DPDI)
- B+B/C(PDI or DPDI) dual live
- B+PW (Duplex or independent update)
- B/C(PDI or DPDI)+PW (Triplex or independent update)
- B+CW (CW update)
- B/C(PDI or DPDI)+CW (CW update)
- B/Color-TDI
- B/Color-TDI+PW-TDI

1.6. System Language Support

- English

- Chinese
- German
- Italian
- Spanish
- French
- Russian
- Turkish
- Portuguese

1.7. User Management

- User Types: Administrator, Operator
- Switch user in login page

1.8. Optional

- Transducers
- Needle Guide Bracket Kits
- CW(with phased-array transducers)
- Panorama
- Needle Visualization
- Auto IMT
- Anatomic M mode
- TDI
- Auto OB(BPD, HC, FL, HUM)
- Advanced DICOM (Modality Worklist and Structured Report)
- Printers
- USB Disk
- Footswitch (single button/double buttons)
- Hard drive: 1TB /120GB SSD (configuration in order before shipment only)

2. Physical Specification

2.1. System Architecture

- Physical Channels: 64
- System Frequency range: 1-17MHz
- System dynamic range: 0-264
- Beam forming: Quad beam
- Processor: i7 with quad virtual cores
- Memory: 16GB
- Hard drive: 1TB(standard)/120GB SSD(Optional)
- Operation System: 64bit Linux system

2.2. Dimension and weight

- Height: 143.2--163.2cm
- Width: 65.0cm
- Depth: 94.0--95.3cm

- Weight: 80 kg(no peripherals)

2.3. Monitor

- 21.5" high resolution LCD monitor
- Resolution: 1920 x 1080
- Imaging field size: 1024*722
- Tilt: 30° upward, 20° downward
- Swivel: $\pm 90^\circ$
- View angle: right 89°,left 89°,up 89°,down 89°
- Built-in stereo speaker
- Brightness and Contrast adjustable

2.4. Wheel

- Diameter: 5 inch
- 4 wheels: lock and swivel

2.5. Transducer port and holder

- 4 active ports
- 5 holders (1 dedicated for endocavity transducer)

2.6. Electrical Power

- Voltage: 110V-240VAC
- Frequency: 50/60 Hz
- Power: 250w

2.7. Operating Environment

- Ambient temperature: 0° to 40°C
- Relative Humidity: 15%~95% (no condensation)
- Atmospheric pressure: 86kPa-106kPa

2.8. Storage Environment

- Ambient temperature: -20° to 55°C
- Relative Humidity: 15%~95% (no condensation)
- Atmospheric pressure: 70kPa-106kPa

3. User Interface

3.1. Control Panel

- Interactive back-lighting
- Hard Keys provides tactile feedback
- Programmable store keys
- Physical trackball
- Electronic lift up/down: 20 cm range up
- 8 segment TGC sliders
- Retractable keyboard

- Targeted down-lighting

3.2. Touch Screen

- 10.1" Touch screen
- Gesture-control
- User configurable
- Support QWERTY keyboard for text input
- Brightness adjustable

3.3. System boot-up

- Boot up from complete shut-down in about 60 seconds 40 seconds(with SSD hard drive)
- Boot up from sleep in about 16 sec.
- Shut-down in about 18 sec

3.4. Comments

- User-programmable home position
- Arrow with user controlled orientation
- Arrow size adjustable: three size
- Soft keyboard with full support for diacritic characters
- Block move and delete for separate blocks of text
- Support physical keyboard for text input
- Smart text replacement for predefined text (e.g., Long replaces Trans with one keystroke)
- 266user-defined comments in pre-defined presets
- User customizable

3.5. BodyMark

- Up to 100 Body Mark graphics in library
- Support separate body mark in Dual and Quad
- User customizable

3.6. Screen Information

- EDAN logo
- Hospital name
- Date
- Time
- Patient ID
- Patient Name
- Patient Gender
- Patient Age
- Transducer model
- Preset name
- Mechanical index (MI)
- Thermal Index (TI)
- Imaging parameters
- Gray Scale bar
- Depth Scale

- Thumbnail
- Mini Report

Not all the items are listed in here, please refer to the User Manual.

4. Imaging Parameters

4.1. B-Mode

- Simple preset: Detail/General/Penetration
- Auto optimization: Gain and TGC
- Digital Zoom: x0.7-x2.0 (available on live and freeze state)
- PIP (Picture in Picture) for zoom
- Depth: 1.0- 30.0cm
- Frequency: 1.0-17.0MHz (3 fundamental & 2 harmonic frequencies)
- eSRI : Off, Low, Med, High
- FOV: Small, Med, Large, Full
- B steer: 0°, ±10°
- Gain: 0-100dB, 1dB/step
- TGC: 8 segments
- Dynamic range: 40-96 dB, step 2dB/step
- FR (frame rate): Low, Med, High
- Max Frame rate: ≥ 227f/s (depending on transducers)
- Map: 0-10 (Max up to 20 types)
- Persistence: Off, Low, Med, High
- Focus position adjustable
- Focus Number: 1-3
- Colorize: on/off
- Tint: 5 types, Gold, Sepia, Blue, Ice, Clear
(Max up to 20 types)
- Up/Down flip
- Left/Right flip
- Spatial compounding: on/off (max 3 angles)
- Trapezoid Imaging: on/off
- Panorama Imaging: on/off (max length: 1.2m)
- Need Vis.: 3 angles
- Needle Guide
- Display format: single(B), dual(B+B), Quad(4B)
- Acoustic Power: 10%-100%, step 10%

4.2. M-Mode

- Sweep speed: 1s, 2s, 4s, 8s, 13s
- Line Persist: Off, Low, Med, High
- Map : 0-10
- Colorize: on/off

- Tint: Gold, Sepia, Blue, Ice, Clear
- Gain: 0-100dB, 1dB/step
- Frequency: 1.0-17.0MHz((3 fundamental and 2 harmonic frequencies)
- Dynamic range: 40-96 dB, step 2 dB/step(Max up to: 40-264)
- Display formats: 1:2,1:1,2:1(up: down),1:1(left: right), full screen
- Acoustic Power: 10%-100%, step 10%

4.2.1 Anatomic M mode

- Available on live and freeze

4.3. Color Doppler

- Simple preset: HighFlow/MidFlow/LowFlow
- Dual live (B/B+C)
- ROI size/position: adjustable
- Frequency: 2.0-8.0 MHz
- Gain: 0-100dB, 1dB/step
- FR(frame rate): Low, Med, High
- Max Frame rate: ≥ 157 f/s (depending on transducers)
- Persistence: Off, Low, Med, High
- Smoothing: Off, Low, Med, High
- Wall filter: Low, Med, High
- Color map: 0-7
- Steer angle
 $0^\circ, \pm 5^\circ, \pm 10^\circ$ (L17-7SD)
 $0^\circ, \pm 10^\circ, \pm 20^\circ$ (L12-5D)
- PRF: 0.6- 11.4kHz
- Scale: 2.8-210 cm/s
- Baseline: -120-120, 10/step
- Threshold: 0-100, 5/step
- Invert: on/off
- Auto optimization: Gain and Scale
- Acoustic Power: 10%-100%, step 10%

4.4. Power Doppler Imaging

- Simple preset: High Flow/Mid Flow/Low Flow
- Dual live (B/B+PDI)
- Directional Power Doppler Imaging(DPDI)
- ROI size/position: adjustable
- Frequency: 2.0-8.0 MHz
- Dynamic range: 10-70 dB, 5dB/step
- Gain: 0-100dB, 1dB/step
- FR(frame rate): Low, Med, High
- Max Frame rate: ≥ 157 f/s(depending on transducers)
- Persistence: Off, Low, Med, High

- Smoothing: Off, Low, Med, High
- Wall filter: Low, Med, High
- Color map: 0-7
- Steer angle:
0°, ±5°, ±10° (L17-7SD)
0°, ±10°, ±20° (L12-5D)
- PRF: 0.6- 11.4kHz
- Baseline: -120-120, 10/step(only available on DPDI)
- Threshold: 0-100, 5/step
- Invert: on/off (available on DPDI)
- Acoustic Power: 10%-100%, step 10%

4.5. Pulsed Wave Doppler

- Simple preset: High Flow/Mid Flow/Low Flow
- HPRF(Automatic invocation as needed to maintain gate location/scale)
- Auto Trace: Auto Doppler measurements, User selectable direction
- Duplex and Triplex displays
- Frequency: 2.0-8.0 MHz
- PRF: 0.9-14.7kHz
- Gain: 0-100dB, 1dB/step
- Dynamic range: 10-70 dB, 5dB/step
- Wall filter: Low, Med, High
- Sweep speed: 2s, 4s, 6s, 8s, 12s
- Baseline: -4-4, 1/step
- Angle correction: -80° -80°, 1°/step
- Quick Angle: -60°/0°/60°
- Steer:(available on linear transducers)
0°, ±5°, ±10° (L17-7SD)
0°, ±15°, ±20° (L12-5D)
- Invert
- Volume: 0-99, 1/step
- Map: 0-10
- Colorize: on/off
- Tint: Gold, Sepia, Blue, Ice, Clear
- Gate size: 0.5-20 mm
- Display formats: 1:2,1:1,2:1(up: down),full screen
- Auto optimization: Gain or DR or Scale/Baseline
- Acoustic Power: 10%-100%, step 10%

4.6. Continuous Wave Doppler

- Simple preset: High Flow/Mid Flow/Low Flow
- Frequency: 2.0 MHz
- PRF: 1- 89.3kHz
- Gain: 0-100dB, 1dB/step
- Dynamic range: 10-70 dB, 5dB/step

- Wall filter: Low, Med, High
- Sweep speed: 2s, 4s, 6s, 8s, 12s
- Baseline: -4-4, 1/step
- Angle correction: -80° -80°, 1° /step
- Quick Angle: -60° /0° /60°
- Invert
- Volume: 0-99, 1/step
- Map: 0-10
- Colorize: on/off
- Tint,5 types: Gold, Sepia, Blue, Ice, Clear
- Display formats: 1:2,1:1,2:1(up: down),full screen

4.7. Tissue Imaging Doppler(TDI)

4.7.1 Color TDI

- Simple preset: High Flow/Mid Flow/Low Flow
- Dual live (B/B+C)
- ROI size/position: adjustable
- Frequency
- Gain : 0-100, 1/step
- FR(frame rate): Low, Med, High
- Max Frame rate: ≥ 100 f/s
- Persistence: Off, Low, Med, High
- Smoothing: Off, Low, Med, High
- Wall filter: Low, Med, High
- Color map
- Scale: 6-80cm/s
- PRF: 0.6-11.4KHz
- Baseline: -120-120, 10/step
- Threshold: 0-100, 5/step
- Invert: on/off
- Acoustic Power: 10%-100%, step 10%

4.7.2 PW TDI

- Simple preset: High Flow/Mid Flow/Low Flow
- Invert
- Duplex and Triplex displays
- Frequency
- Gain : 0-100dB, 1dB/step
- PRF: 0.9-14.7KHz
- Wall filter: Low, Med, High
- Dynamic range : 10-70 dB, 5dB/step

- Sweep speed : 2s, 4s, 6s, 8s, 12s
- Baseline : -4-4, 1/step
- Angle correction : -80° -80°, 1° /step
- Quick Angle : -60° /0° /60°
- Volume : 0-99, 1/step
- Map : 0-10
- Colorize: on/off
- Tint: Gold, Sepia, Blue, Ice, Clear
- Gate size : 0.5-20 mm
- AT Side: Both, Up, Down
- Display formats : 1:2, 1:1, 2:1(up: down), full screen
- Acoustic Power: 10%-100%, step 10%

5. Cine Review and Post-Processing

5.1. Cine Review

- Frame by frame manual review
- Auto playback with 8 speeds
- Start frame and end frame are selectable for cine loop review
- Maximum cine memory is up to (depends on transducers and image parameters):
21895 frames for B mode
9086 frames for Color mode
123s for M mode
1214s for PW/CW Doppler mode

5.2. Post-Processing

- B Mode: gain, TGC, zoom, dynamic range, eSRI, colorize, map
- M Mode: gain, TGC, dynamic range, colorize, map
- Color Mode: zoom, color map, invert
- PW/CW: gain, dynamic range, colorize, map, baseline, angle, invert

***Not available the stored images and clips in Review**

6. 3D/4D (Optional)

- Acquisition Modes: 4D, Static 3D
- Visualization Modes: Volume Rendering, MPRs, Multi-Slice
- VOI adjustable: curve cut plane
- Render Modes: Surface, MIP, X-Ray
- 3D Clip (2D capture of 3D images)
 - Cut tool: trace, box, erase
 - Function: undo, undo all, redo
- Display formats: Single 3D, Dual(A-plane + 3D), Quad(A/B/C Planes + 3D)
- Parameters for 3D 3D: Threshold, Smooth, Brightness, Contrast, Tint

- eFace: Edan Auto show face
- Save and edit volume data set
- MPR measurements (Demo version only)

7. Imaging Storage and Exam Database

7.1. Imaging Storage

- 1TB hard drive, 900 GB for data storage
- Storage up to approximately >400,000 lossless single frames
- Compression types of static image and clip: lossless, high, mid, low
- Maximum clip is up to:
250 frames for B/Color mode B/Color
10 s (250 frames) for M/PW/CW mode M/PW/CW

7.2. Exam Database

- Support exam storage without patient information
- Support exam query
- Support review current exam or prior exam
- Support review images and report of an exam
- Support export images as BMP , AVI or DCM format to removable disk or DVD-R/RW
- Support export images as DCM format to DVD-R/RW
- Support import/export exams(including patient information, images, measurement results)
- Support comments, body mark and measurements in review

8. Connectivity

- DICOM Storage
Verify SCP
Static image store SCU DCM
Ultrasound multi-image store SCU DCM
Four levels of compression
Data transfer options
Removable media
In-progress network storage in background
Auto-transfer in background at exam end
Manual-transfer in background on demand
- 6 USB Ports (4USB 2.0 and 2 USB 3.0)
- Video out
VGA
DVI
S-video: PAL/NTSC
- Ethernet

- ECG port (inactive)
- Standard DVD-R/RW
- Wi-Fi(Subject to Regulatory approval)
- DICOM Modality Worklist
- DICOM Structured Report: OB, GYN, Cardiac, and Vascular
- DICOM store to multiple networks
- Non-DICOM network transfer(FTP transfer) in background
- Transfer management UI: review transfer task status, delete a transfer task

9. Preset

- Transducer specific presets
 - ABD
 - AbdDiff
 - Early OB
 - OB
 - Fetal Echo
 - GYN
 - Renal
 - Aorta
 - Spine
 - Prostate
 - Thyroid
 - Breast
 - Testis
 - Carotid
 - Low Ext A(Lower Extremity Artery)
 - Low Ext V(Lower Extremity Vein)
 - Up Ext A(Upper Extremity Artery)
 - Up Ext V(Upper Extremity Vein)
 - Nerve
 - Sciatic N(Sciatic Nerve)
 - Sup Nerve(Superficial Nerve)
 - MSK
 - Sup MSK(Superficial MSK)
 - Knee
 - Shoulder
 - Vascular
 - Adult Card(Adult Cardiac)
 - PedCard(Pediatric Cardiac)
 - Intra-Op(Intra-operative)
 - Ped Abd
 - Neo Abd
 - Neo Head

TCD(Transcranial Doppler)

Vascular Access

Lung

IVF

- User customizable presets: Copy, Delete, Save, Save as
- Supports a second page, up to 30 presets per transducer
- Each preset can share comment, body mark, and measure presets

10. Peripheral

- Black/white Digital/Analog Video printer

SONY UP-X898MD

- Color Digital video printer

SONY UP-D25MD

- Color Analog video printer

SONY UP-25MD

- Graph/text printer

HP OfficeJet Pro 251dw

HP LaserJet Pro 200 M251n

HP LaserJet CP1525n Color

HP Deskjet Ink Advantage 2010

HP Deskjet 1010 Color

HP Deskjet 1510 Color

HP Deskjet Pro 400

HP Deskjet Pro M401d

Canon PIXMA E518

Canon iP2780

HP Deskjet 2029

HP Deskjet 1112

EPSON L310

HP DeskJet 1050

HP DeskJet 2050

HP DeskJet M252n

The printers listed above are the recommended printer which were verified. More compatible printers which were not verified can be found at

https://developers.hp.com/hp-linux-imaging-and-printing/supported_devices/index, or at

http://gimp-print.sourceforge.net/p_Supported_Printers.php.

11. Measurement and Report

- Default measurement unit options
 - Distance: mm, or cm
 - Area: mm², or cm²

- Volume: mm³, or cm³
- Caliper Size: switch automatically according to the distance (3 sizes)

11.1. General Measurement

● B Mode

- Distance
- Circumference(Ellipse, Trace, and Spline)
- Area(Ellipse, Trace, and Spline)
- Angle
- Volume
- %Dist Stenosis (Caliper)
- %Area Stenosis (Ellipse, Trace, and Spline)

● M Mode

- Distance
- Time
- Slope
- HR

● Doppler

- Auto Trace: PS, ED, MD, RI, PI, S/D, HR, Time, TAMax, TAMean, VTI, AT, DT, PGmax, PGmean
- Trace(Draw or Spline): PS, ED, MD, RI, PI, S/D, Time, TAMax, VTI, AT, DT, PGmax, PGmean
- Caliper: V1, V2, Acceleration, Time, RI, S/D, ΔV, PG1, PG2, PHT
- RI: PS, ED, RI, S/D
- HR

11.2. Application Measurement

● Abdomen

- Liver: Length, Width, Height
- Portal Vein Diameter
- Common Hepatic Duct
- Gallbladder: Length, Height, Wall Thickness
- Common Bile Duct
- Pancreas: Head, Body, Tail, Duct
- Spleen: Length, Height
- Aorta Diameter
- Abdominal Aorta
- Superior Mesenteric Artery
- Inferior Mesenteric Artery
- Hepatic Artery
- Splenic Artery
- Renal Artery
- Portal Vein
- Inferior Vena Cava
- Main Portal Vein
- Hepatic Vein
- Middle Hepatic Vein

- Splenic Vein
- Superior Mesenteric Vein
- Inferior Mesenteric Vein
- **Gynecology**
 - Uterus: Length, Width, Height, Endometrium Thickness, UT Cavity
 - Cervix: Length, Width, Height, UT-L/CX-L
 - Ovary: Length, Width, Height
 - Follicle: D1, D2, D3, Fol-Mean(Calc)
 - Cyst: D1, D2, D3
 - Fluid POD
 - Uterine Artery
 - Ovary Artery
- **Obstetric**
 - Early OB: GS, YS, CRL, NT, BPD, FL, HUM, AF, FHR, Ductus Venosus, Ovary Artery, Uterine Artery
 - OB: BPD, OFD, HC, AC, FL, TAD, APAD, CER, HUM, ULNA, RAD, TIB, FIB, APTD, TTD, FTA, THD, Foot, AF, AFI, FHR, MCA, Umbilical Artery, Placenta Artery, Ductus Venosus
 - Fetal Echo: RV Diam, RA Diam, RVOT Diam, LV Diam, LA Diam, LVOT Diam, Ao Asc, Ao Arch Diam, Ao Isthmus, Desc Aorta, MPA Diam, Ductus A, CTAR, HR, MCA, Umb. Artery, Placenta Artery, Ductus Venosus, MV, TV, MPV, Ovary Artery, Uterine Artery, Fetal Aorta
 - Gestational Age
 - Fetal Growth
 - Estimated Fetal Weight (EFW)
 - Multi-gestational Measurement.
 - Auto OB(BPD, HC, FL, HUM)
- **Cardiac**
 - LV Simpson: A4C Dias., A4C Sys., A2C Dias., A2C Sys., SV, EF, CO, SI, CI
 - Vent. Dim: RVAWd, RVIDd, IVSTd, LVIDd, LVPWd, IVSTs, LVIDs, LVPWs, SV, EF, FS, CO, SI, CI
 - HR
 - PV Diam
 - RVDs
 - RA: Length, Width
 - LA: Length, Width
 - Ao Asc
 - AoD
 - LVOT Diam
 - RVOT Diam
 - LVET
 - LA/AO: LA, AoD, RVOT Diam
 - MV: E/A, E-F Slope, EPSS, MV PHT, MV Trace, IVRT, MV A Dur, MV DecT
 - TV: TV trace, TV Max
 - AoV: LVOT Trace, LVOT Vmax, AoV Trace, AoVVmax
 - PV: PV trace, PV Max
 - Pulmonic Vein: PVein S Vel, PVein D Vel, PV A Vel

- PISA: MR Rad, MR Als. Vel, AR Rad, AR Als. Vel, TR Rad, TR Als. Vel, PR Rad, PRAIs. Vel, MR Trace, AR Trace, TR Trace, PR Trace
- **Urology**
 - Renal: Length, Width, Height, Cortex
 - Pre-void Bladder: Length, Width, Height
 - Post-void Bladder: Length, Width, Height
 - Prostate: Length, Width, Height
 - Seminal: Length, Width, Height
 - Testis: Length, Width, Height
 - Renal Artery
 - Arcuate Artery
 - Segmental Artery
 - Interlobar Artery
- **Small Part**
 - Thyroid: Length, Width, Height, Isthmus, Superior Thyroid Artery, Inferior Thyroid Artery
 - Breast: Lesion1, Lesion2, Lesion3, Lesion4, Lesion5
- **Vascular**
 - Carotid: Common Carotid Artery, External Carotid Artery, Internal Carotid Artery, Vert Artery, Subclavian Artery
 - Upper Extremity Artery: Subclavian Artery, Axillary Artery, Brachial Artery, Ulnar Artery, Radial Artery
 - Upper Extremity Vein: Subclavian Vein, Axillary Vein, Brachial Vein, Cephalic Vein, Basilic Vein, Ulnar Vein, Radial Vein, Median Cubital Vein
 - Low Extremity Artery: Common Femoral Artery, Deep Femoral Artery, Superficial Femoral Artery, Common Iliac Artery, External Iliac Artery, Internal Iliac Artery, Popliteal Artery, Peroneal Artery, Posterior Tibial Artery, Anterior Tibial Artery, Dorsalis Pedis Artery
 - Low Extremity Vein: Common Femoral Vein, Deep Femoral Vein, Superficial Femoral Vein, Common Iliac Vein, External Iliac Vein, Internal Iliac Vein, Great Saphenous Vein, Popliteal Vein, Peroneal Vein, Posterior Tibial Vein, Anterior Tibial Vein, Small Saphenous Vein
 - IMT(Auto, Caliper): Common Carotid Artery Intima-Media Thickness, Internal Carotid Artery Intima-Media Thickness, Carotid Artery Bifurcation Intima-Media Thickness
 - Volume Flow: Volume Flow Area, Volume Flow Time Average Mean Velocity
- **Pediatric**
 - Neo-Head: Left lateral ventricle, Right lateral ventricle, Left trigone, Right trigone
 - HIP: angle α and β

For more measurement information, please refer to the User Manual.

11.3. Report

- Editable worksheet
- Report type: ABD, GYN, OB, URO, VAS, SMP, FETAL, CARD, PED
- Multiple number of selected images
- Support zoom in preview
- Export as PDF format
- Findings section
- User-imported Header

- User-defined hospital logo

12. Transducers (Optional)

● C5-2D

- Imaging Format: convex array
- Number of Elements: 128
- Convex Radius: 60 mm
- FOV: 60°
- Bandwidth: 2-5MHz
- Fundamental Frequency: 2-4MHz, 3-5MHz, 2-5MHz
- Harmonic Frequency: H2-4MHz, H3-5MHz
- Color Doppler Frequency: 2.5MHz, 3.0MHz
- PW Frequency PW: 2.3MHz, 3.0MHz
- Focus Position: 10 positions adjustable
- Depth: 40-300mm, 10 mm/step
- PW velocity: max 9m/s($\pm 60^\circ$)
- Exam Presets: ABD, Abd difficult, Early OB, Fetal Echo, GYN, Renal, Aorta, Spine, MSK, Nerve, Lung.
- Applications: Abdomen, OB, Gynecology, MSK
- Needle Guide: available, BGK-C5-2, Supports 16G, 18G, 20G, 22G

● L12-5D

- Imaging Format: general linear array
- Number of elements: 128
- Footprint: 38 mm
- Bandwidth: 5-12MHz
- Fundamental Frequency: 5-8MHz, 6-10MHz, 7-11MHz
- Harmonic Frequency: H6-10MHz, H7-12MHz
- Doppler Frequency: 4.7MHz, 5.7MHz
- Focus Position: 11 positions adjustable
- Depth: 10-110mm, 5 mm/step
- PW velocity: max 4.75m/s($\pm 60^\circ$)
- Exam Presets: Thyroid, Breast, Carotid, Lower Extremity Artery, Lower Extremity Vein, Upper Extremity Artery, Upper Extremity Vein, MSK, Superficial MSK, Nerve, Superficial Nerve, Testis, Shoulder, Vascular Access.
- Applications: Small parts, MSK, Vascular
- Needle Guide: available, BGK-L40UB, Supports 16G, 18G, 20G, 22G

● E8-4D

- Imaging Format: endocavity micro convex array
- Number of elements: 128
- Convex Radius: 10 mm
- FOV: 150°
- Bandwidth: 4-8MHz
- Fundamental Frequency: 4-6MHz, 4-7MHz, 5-8MHz
- Harmonic Frequency: H5-7MHz, H5-8MHz

- Doppler Frequency: 4.4MHz, 5.3MHz
- Focus Position: 11 positions adjustable
- Depth: 15-110mm, 5 mm/step
- PW velocity: max 4.5m/s($\pm 60^\circ$)
- Exam Presets: Early OB, GYN, Prostate, IVF
- Applications: OB, Gynecology, Urology
- Needle Guide: available, BGK-CR10UA, Supports16G

● **P5-1D**

- Imaging Format: phased array
- Number of elements: 64
- Footprint: 16 mm
- FOV: 90°
- Bandwidth: 1-5MHz
- Fundamental Frequency: 1-3MHz, 2-4MHz, 2-5MHz
- Harmonic Frequency: H2-4MHz, H3-5MHz
- Color Doppler Frequency: 2.0MHz, 2.5MHz
- PW Frequency PW: 2.0MHz, 2.2MHz
- CW Frequency: 2.0MHz
- Focus Position: 11 positions adjustable
- Depth: 40-300mm, 10 mm/step
- PW velocity: max 10/s($\pm 60^\circ$)
- CW velocity: max 64m/s($\pm 60^\circ$)
- Exam Presets: ABD, Abd Difficult, Adult Cardiac, Pediatric Cardiac.
- Applications: Adult Cardiac, Pediatric Cardiac, ABD
- Needle Guide: unavailable

● **L17-7SD**

- Imaging Format: compact linear array
- Number of Elements: 128
- Footprint: 26mm
- Bandwidth: 7-17MHz
- Fundamental Frequency: 7-11MHz, 8-13MHz, 9-15MHz
- Harmonic Frequency: H9-13 MHz, H10-17MHz
- Doppler Frequency: 6.7MHz, 8.0MHz
- Focus Position: 11 positions adjustable
- Depth: 10-110mm, 5 mm/step
- PW velocity: max 3.25m/s($\pm 60^\circ$)
- Exam Presets: MSK, Nerve, Intra-operative, Vascular, Vascular Access.
- Applications: MSK, Vascular, SMP, Intra-operative
- Needle Guide: not available

● **MC8-4D**

- Imaging Format: micro convex array
- Number of elements: 128
- Convex Radius: 15 mm
- Bandwidth: 4-8MHz

- Fundamental Frequency: 4-6MHz, 4-7MHz, 5-8MHz
- Harmonic Frequency: H4-7MHz, H5-8MHz
- Doppler Frequency: 4.2MHz, 5.0MHz
- Focus Position: 11 positions adjustable
- Depth: 10-110mm, 5 mm/step, 110-150mm, 10 mm/step
- PW velocity: max 5m/s ($\pm 60^\circ$)
- Exam Presets: Nerve, Pediatric Abdomen, Neonatal Abdomen, Neonatal Head, Vascular
- Applications: Neonate, Pediatric, Abdomen, MSK, Vascular
- Needle Guide: available, BGK-R15UB, Supports 16G, 18G, 20G, 22G

● **MC9-3TD**

- Imaging Format: micro convex array
- Number of elements: 128
- Convex Radius: 10mm
- Bandwidth: 3-9MHz
- Fundamental Frequency: 4-6MHz, 4-7MHz, 5-8MHz
- Harmonic Frequency: H5-8MHz, H6-9MHz
- Doppler Frequency: 3.6MHz, 4.5MHz
- Focus Position: 11 positions adjustable
- Depth: 10-110mm, 5 mm/step, 110-150mm, 10 mm/step
- PW velocity: max 6m/s ($\pm 60^\circ$)
- Exam Presets: Nerve, Pediatric Abdomen, Neonatal Abdomen, Neonatal Head, Vascular.
- Applications: Neonate, Pediatric, Abdomen, MSK, Vascular
- Needle Guide: unavailable

● **C5-2MD**

- Imaging Format :convex wobbler array
- Number of Elements: 128
- Convex Radius: 40 mm
- FOV: 69°
- Bandwidth: 2-5MHz
- Fundamental Frequency: 2-4MHz, 3-5MHz, 2-5MHz
- Harmonic Frequency: H2-4MHz, H3-5MHz
- Color Doppler Frequency: 2.6MHz, 3.0MHz
- PW Frequency PW: 2.6MHz, 3.0MHz
- Focus Position: 10 positions adjustable
- Depth: 40-300mm, 10 mm/step
- PW velocity: max 8m/s ($\pm 60^\circ$)
- Exam Presets: ABD, Early OB, OB, Fetal Echo, GYN
- Applications: Fetal/OB, Abdomen, Gynecology
- Needle Guide: not available

13. Footswitch (Optional)

- Model (USB Port) USB:FS-81-SP(Twin)-USB, or FS-81-SP-USB
- Support User-definable functions (Freeze, Save, Print)

10. Regulatory approvals

- FDA Class II Device
- CE/MDD Class II a

11. Standard Conformance

- IEC 60601-1: Medical Equipment Safety
- IEC 60601-1-2: Medical Device Electromagnetic Safety
- IEC 60601-2-37: Ultrasonic Medical Equipment Safety
- IEC 62133: Battery Safety
- IEC 62304: Medical Device Software Life-cycle Process
- IEC 62366: Medical Device Usability Engineering
- EN ISO 14971: Medical Device Risk Management
- ISO 10993: Medical Device Biocompatibility
- NEMA UD 2: Output Measurement for Diagnostic Ultrasound Equipment
- NEMA UD 3: Display of Thermal and Mechanical Acoustic Output Indices on Diagnostic Ultrasound Equipment

12. Regulatory Approval Remarks

Acclarix LX4 is restricted to sale until CE and FDA registration of 1.0 release are cleared. The features approved to sale depends on the final regulatory approval result.



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