EDAN

Datasheet

Acclarix AX3 series
Diagnostic Ultrasound System

Revision History

Version	Revisions	Date
1.0	Updated for R1.1 release. See the changes highlighted with blue color	2019-9-12
1.1	Updated for R1.2 release. See the changes highlighted with blue color.	2020-02-09
1.2	Updated for R1.21 release : Updated the DICOM store function.	2020-03-26
1.3	Updated for R1.40 release. See the changes highlighted with blue color.	2020-09-17
1.4	Updated for R1.41 release. See the changes highlighted with blue color.	2020-11-25
1.5	Updated for R1.50 release. See the changes highlighted with blue color.	2021-03-05

This datasheet applies to Acclarix AX3 series Diagnostic Ultrasound Systems, including Acclarix AX3, Acclarix AX3 Exp, Acclarix AX3 Super, Acclarix AX25, Acclarix AX28, Acclarix AX2, Acclarix AX2 Exp, Acclarix AX2 Super, Acclarix AX15 and Acclarix AX18 models. The configuration difference between each model is listed in the following table.

Models	**Configuration Difference**			
	Feature1	**Feature2**	**Feature3**	**Feature4**
	Seminal Vesicle Meas.	**Testis Meas.**	**Single Button Footswitch**	**Socket Number**
Acclarix AX3	√	√	√	Double
Acclarix AX3 Exp	√	X	√	Double
Acclarix AX3 Super	X	X	√	Double
Acclarix AX25	X	√	√	Double
Acclarix AX28	√	X	X	Double
Acclarix AX2	√	√	√	Single
Acclarix AX2 Exp	√	X	√	Single
Acclarix AX2 Super	X	X	√	Single
Acclarix AX15	X	√	√	Single
Acclarix AX18	√	X	X	Single

Product Description

The remarkable Acclarix AX3 series Compact Ultrasound System delivers a powerhouse combination of features to meet the demands of point-of-care and general imaging applications. The Acclarix AX3 series 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. Dual active transducer ports design enables switching transducer seamlessly at a finger tip. Dual batteries extend the imaging scanning. Extremely light body embodied with brand new EIS operating system empowers smooth system operation and fast system response.

Advanced Technique and Features

TAI-Tissue Adaptive Imaging
eSRI- Adaptive Speckle Reduction Imaging
Frequency Compounding Imaging
Adaptive Spatial Compounding Imaging
Harmonic Imaging
B mode one-key Optimization
PW mode one-key Optimization
CW mode one-key Optimization
Digital Multi-Beam forming
Trapezoid Imaging
Adaptive Doppler imaging
Spectrum Enhancement
Digital Zoom
Acoustic Zoom
Full Screen Zoom
Auto Doppler trace
Anatomic M mode
TDI mode-Tissue Doppler Imaging
3D/4D Imaging
Auto IMT
Needle Visualization
eLearn Instruction software
Panaroma
ECG synchronization
Color M mode
Elastography mode

System Overview

System Architecture

Physical Channels	64
Digital Channels	≤1105920
Gray Scale	256
Beam Forming	Eight beam
Processor	ARM
Memory	2 GB
Hard Drive	120GB/512GB/1TB SSD
Operating System	Android
System Boot-up	About 30s
Boot-up from sleep	5s(Sleep mode) 8s(Deep Sleep mode)
Shutdown	3s

Dimensions and Weight

Dimension	375 mm×380 mm×58 mm
Net Weight (No battery)	4.2kg (one transducer port) 4.35kg (two transducer ports)
Net weight (1 battery)	4.65kg (one transducer port) 4.79kg (two transducer ports)
Net weight (2 batteries)	5.1kg (one transducer port) 5.24kg (two transducer ports)

*Feature is subject to regulatory approval, and may not be available for sale in specific countries.

Monitor

- 15.6'' high resolution LCD monitor
- Resolution: 1920 x 1080
- Image Size: 1040*780
- Open angle: 0°-180°
- Magnetic latch closure
- Built-in stereo speaker
- Brightness and Contrast adjustable

Transducer Ports

- Dual active transducer ports
- Single or Dual transducer ports configurable
- One MTC module is supported, and maximum four transducers can be connected simultaneously.

Battery

- Rechargeable Li-ion Battery
- Max. two batteries configurable (two batteries with 5000mAh*2 capacity or two batteries with 6800mAh*2 capacity)
- For 5000mAh capacity battery
  - Approximately 1 hour of typical ultrasound exam use for one fully charged battery.
  - Approximately 2 hours of typical ultrasound exam use for two fully charged batteries.
  - One battery fully charged in about 2.5 hours
  - Two batteries fully charged in about 5 hours.
- For 6800mAh capacity battery
  - Approximately 1.5 hour of typical ultrasound exam use for one fully charged battery.
  - Approximately 3 hours of typical ultrasound exam use for two fully charged batteries.
  - One battery fully charged in about 3.5 hours
  - Two batteries fully charged in about 6.5 hours.
- Removable
- Battery indicator on the console near the handle.
- Battery level icon displayed on the main screen.
- Up to 18 hours Standby time (two fully charged batteries) in Deep Sleep mode.

AC Power Requirements

Voltage	100 -240 V~
Frequency	50 Hz/60 Hz

Environment Requirements

Operating Environment

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

Storage Environment

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

Language Supported

- English
- Chinese
- German
- French
- Italian
- Spanish
- Russian
- Portuguese
- Polish

I/O Ports

- S-Video
- USB 3.0
- USB 2.0(two)
- HDMI
- Ethernet

*Feature is subject to regulatory approval, and may not be available for sale in specific countries.

Options

- Transducers
- Needle Guide Bracket Kits
- Printers
- Battery
- 512GB/1TB SSD
- WIFI
- Footswitch
  - Single button/Double buttons
  - User-defined Functions(Freeze, Save, Print)
- Simple Cart: MT-808
  - Height Variable (0~200±10mm)
  - Length 602±5mm, width 600±5mm and height (849~1049)±5mm
  - A drawer for glossary storage
  - A shelf for Video printer
  - 4 transducer holders and 2 gel holders with removable silicon cover
  - Cable manager
  - Drawer height and position adjustable
- Suitcase
- MTC module
- ECG module
- External DVD drive

System Ergonomic Design

Dual Transducer Ports

Dual active transducer ports design enables switching transducer seamlessly at a finger tip, and reduces the workload of disconnecting/connecting transducers during an exam.

Handle

Provides wrist support during imaging.

Magnesium alloy body

Extremely light weight realizes the true portability.

User Interface

Control Panel

- Interactive back-lighting
- Hard Keys provides tactile feedback
- User-defined keys
- Physical trackball

Touch Screen

- 10.1'' Touch screen
- Gesture-control
- Virtual TGC sliders
- Support visual Chinese, English QWERTY keyboard, German QWERTZ keyboard and French AZERTY keyboard for text input
- Brightness adjustable

Main Screen Display

Information Field

- EDAN logo
- Hospital name
- Date
- Time
- Patient ID
- Patient Name
- Patient Gender
- Patient Age
- Transducer model
- Exam Preset
- LMP/BBT, GA, EDD
- User Name

Image Field

- Mechanical Index (MI)
- Thermal Index (TI)
- Imaging parameters
- Gray Scale bar
- Depth Scale
- Center Mark
- Measured result window
- TGC curve

*Feature is subject to regulatory approval, and may not be available for sale in specific countries.

Measurements Menu Field

- Available generic and application measurements for current exam preset.
- Pre-categorized measurement groups.
- Consistent with the display on Measurement Touch Screen (10.1-inch).

Thumbnail Field

- All captured static images and cine clips
- Quick preview of thumbnails in image area
- Shortcut keys for selecting, viewing, deleting, exporting images.
- Display of catheter size reference.

User Feedback Field

- Illustration of trackball and trackball keys
- Cine bar
- Exit icon for exiting RawData review status.
- The active function of user-defined key F1 and F2.

Status Bar

- Utility Icon(access to Utilities function)
- Image Store Icon
- USB Icon
- Printer Icon
- WIFI Icon
- Network Transfer Status Icon
- Hard Drive Icon
- Battery Icon
- DVD icon

User Login Management

- Supports User Login at boot up and at exiting the sleep mode.
- Supports user type of Administrator and Operator
- Supports switching users without powering off the system.
- Support Emergency login for emergency use.

Other Features

- eLearn instruction tool for basic scanning and nerve blocks.
  - Support instructions for OB&GYN, Nerve block, and GI (ABD, Cardiac, etc) scanning.
  - Provides descriptions of Transducer position, Scan technique, Standard ultrasound image, Anatomy, Needle guide, tips, etc.
  - The illustration pictures can be enlarged to full touch screen display by pressing it.
- One-key full screen zoom (3 levels) by user-defined key F1 or F2.

Exam Presets

- System pre-defined exam presets include(Transducer specific) :
  - ABD
  - Abd Difficult
  - EM ABD
  - Aorta
  - Lung
  - FAST
  - Early OB
  - OB
  - EM OB
  - Fetal Echo
  - GYN
  - IVF
  - Urology
  - Prostate
  - Thyroid
  - Breast
  - Testis
  - Carotid
  - Up Ext A (Upper Extremity Artery)
  - Up Ext V (Upper Extremity Vein)

*Feature is subject to regulatory approval, and may not be available for sale in specific countries.

- Low Ext A (Lower Extremity Artery)
- Low Ext V (Lower Extremity Vein)
- Vascular
- Vascular Access
- EM VAS
- Spine
- MSK
- Sup MSK (Superficial MSK)
- EM MSK
- Nerve
- Sup Nerve (Superficial Nerve)
- Shoulder
- HIP
- Adult Cardiac
- Pediatric Cardiac
- EM Adult Card
- Pediatric Abdomen
- Neonatal Abdomen
- Neonatal Head
- TCD
- PICC

- User customizable presets: Copy, Delete, Save as and rename
- Exam presets are configurable in Set-up.
- Supports a second page, up to 30 presets per transducer.
- Each preset can share comment, body mark, and measure presets.
- The display order of the exam presets of each transducer can be adjusted per user's needs.

Annotations

Comments

- User-programmable home position
- Arrow with user controlled orientation
- QWERTY/AZERTY /QWERTZ keyboard
- Block move and delete for separate blocks of text
- Smart text replacement for predefined text (e.g., Long replaces Trans with one keystroke)
- 545 pre-defined comments
- User customizable
- English Comments Library is supported when the system language is not in English.

Body Mark

- Up to 143 Body Mark graphics in library
- Support separate body mark in Dual/Quad mode.

Imaging

Imaging Modes

B-mode

M-mode

- M-mode
- Anatomic M mode(3-line AMM)
- Color M mode

Color Doppler

- Velocity-based color Doppler
- PDI
- DPDI

PW Doppler

CW Doppler

TDI mode

- TVI
- TEI
- TVD
- TVM

3D/4D mode

Elastography Mode

Display Modes

Dual Imaging

- Available for B and Color (PDI/DPDI) mode.
- Displays two image side-by-side, two frozen or one active/one frozen.
- Allows to switch between two images.
- Measurements and calculations are supported on each image and across the dual images.
- Annotations are supported on both images.

Quad Imaging

- Available for B and Color (PDI/DPDI) mode.
- Displays images in four quadrants, four frozen or one active/three frozen.
- Allows to switch between four images.
- Measurements and calculations are supported on each image.
- Annotations are supported on each image.

Imaging Mode Combinations

- B+M
- B/C(PDI or DPDI), Single
- B/C(PDI or DPDI), Dual
- B/C(PDI or DPDI), Quad
- B+B/C(PDI or DPDI), Dual live
- B+Color(PDI or DPDI)+M
- B+PW (Duplex)
- B+PW (Update)
- HPRF
- B/C(PDI or DPDI)+PW (Triplex)
- B/C(PDI or DPDI)+PW (Update)
- B+CW (Update)
- B/C(PDI or DPDI)+CW (Update)
- B+TVI
- B+TVI+TEI
- B+TVI+TVD(Update)
- B+TVI+TVD(Triplex)
- B+TVM(Update)
- B+E

Imaging Parameters

B- Mode (Live imaging)

Image Type	Detail/General/Penetration
Auto(one-key optimization)	TGC, Gain
Digital Zoom	x0.5-x16.0
Acoustic Zoom	Available on B image, zoom in the image in ROI box with high resolution. PIP (Picture in Picture) display.
Display Depth	1-45cm
Frequency	1-19MHz Max. 5 fundamental + 5 harmonic (depends on transducer)
Frequency display	Bandwith, Frequency points
eSRI	Off, Low, Med, High
FOV	Small, Med, Large, Full

*Feature is subject to regulatory approval, and may not be available for sale in specific countries.

Steer	0°, ±10°
Gain	0- 260dB
TGC	8 segments
LGC	8 segments
Dynamic Range	20-320dB
Line Density	Low, Med, High ⩾512 lines
Frame Rate	Linear Transducer: Max. 532f/s, depends on transducer; Convex Transducer: Max. 48f/s at 18cm depth and Full FOV; Phased transducer: Max. 77f/s at 18cm depth and Full FOV.
Map	20 Types
Persistence	Off, Low, Med, High
Focus Position	Max. 16 positions, adjustable
Focus Number	1-4, adjustable
Colorize	On, off
Tint	20 Types
Up/Down Flip	
Left/Right Flip	
Spatial Compounding	On, off (max 3angles)
Trapezoid	On, off (Linear transducer) Max. 10° left/right extended angle
Panorama	On, Off (Max. length 1.2m)
	Real-time speed indicator
TSI	General， muscle， adipose，liquid
Acoustic Power	10%-100%, 10%/step

B- mode(Post-processing & retrospective)

- Gain
- TGC
- LGC
- Zoom
- Dynamic range
- eSRI
- Colorize
- Map
- Up/Down Flip
- Left/Right Flip

M- Mode (Live imaging)

Sweep Speed	10 levels
Line Persist	Off, Low, Med, High
Map	11 Types
Colorize	On, off
Tint	20 Types
Gain	0- 260dB
Frequency	1-17MHz Max. 5 fundamental + 5 harmonic (depends on transducer)
Dynamic Range	20-320 dB
Strip size	Full, large, Med., small
Side-by-side	On(Left/Right) Off(Up/Down)
Acoustic Power	10%-100%, 10%/step
Anatomic M	On, off
	Up to 3 linear sample lines
	Adjustable angle of each sample line

M- mode(Post-processing & retrospective)

- Gain
- TGC
- Dynamic range
- Colorize
- Map
- Stripe Size
- Side-by-side

Color/PDI/DPDI Mode (Live imaging)

Image Type	HighFlow/MidFlow/LowFlow
Dual Live	
ROI size/position	Adjustable
Frequency	Max. 5 levels (depends on transducer)

*Feature is subject to regulatory approval, and may not be available for sale in specific countries.

Gain	0-100dB, 1dB/step
Line Density	Low, Med, High
Dynamic Range	10-70 dB, 5dB/step Not available for Color mode
Frame Rate	Linear Transducer: Max. 356f/s, depends on transducer; Convex Transducer: Max. 8f/s at 18cm depth, Full FOV and biggest ROI; Phased transducer: Max. 14f/s at 18cm depth, Full FOV and biggest ROI.
Persistence	Off, Low, Med, High
Smooth	5 levels
Wall Filter	Low, Med, High
Color Map	20 Types
Steer Angle	0°,±10°, ±20° (L12-5Q, General) 0°,±15°, ±30°(L12-5Q, thyroid) 0°,±5°,±10° (L17-7SQ) 0°,±10°,±20° (L17-7HQ)
PRF	0.6- 11.4kHz
Baseline	25 levels (Not available for PDI mode)
Threshold	0-100
Invert	On, off (Not available for PDI mode)
Panorama	On, Off (Max. length 1.2m)
	Real-time speed indicator
VVI(Velocity Variance Imaging)	
Acoustic Power	10%-100%, 10%/step

Color/PDI/DPDI Mode (Post-Processing & Retrospective)

- Zoom
- Color map
- Invert (Not available for PDI mode)
- Baseline
- Color Hide
- Vel Distr

PW mode (Live imaging)

Image Type	HighFlow/MidFlow/LowFlow
HPRF	Automatic invocation to maintain gate location/scale
Auto Trace	
Trace Side	Up, down, both
Duplex	Max. FR: 43f/s, depends on transducer
Triplex	Max. FR: 11f/s, depends on transducer
Frequency	5 levels
PRF	0.9- 14.7kHz
Gain	0-100dB, 1dB/step
Dynamic Range	10-70 dB, 5dB/step
Wall Filter	Low, Med, High
Sweep Speed	10 levels
Baseline	9 levels
Angle Correction	-80° to 80°
Quick Angle	-60°/0°/60°
Steer	0°,±10°, ±20° (L12-5Q, General) 0°,±15°, ±30°(L12-5Q, thyroid) 0°,±5°,±10° (L17-7SQ) 0°,±10°,±20° (L17-7HQ)
Invert	
Volume	0-99
Map	11 Types
Colorize	On, off
Tint	20 Types
Gate Size	0.5-40 mm
Strip size	Full, large, Med., small
Auto(One-key Optimization)	Gain, DR or Scale/Baseline, user configurable
Acoustic Power	10%-100%, 10%/step
PW velocity	Max. 4.5m/s (correct angle 60°); Max. 13m/s (correct angle 80°)
	Min. 2mm/s (Non-noise signal)

*Feature is subject to regulatory approval, and may not be available for sale in specific countries.

PW Mode (Post-Processing & Retrospective)

- Gain
- Dynamic Range
- Colorize
- Map
- Baseline
- Angle Correct
- Invert
- Strip size
- Auto trace
- Trace side

CW mode (Live imaging)

Image Type	HighFlow/MidFlow/LowFlow
PRF	1- 100kHz
Gain	0-100dB, 1dB/step
Dynamic Range	10-70 dB, 5dB/step
Wall Filter	Low, Med, High
Sweep Speed	10 levels
Baseline	9 levels
Angle Correction	-80° to 80°
Quick Angle	-60°/0°/60°
Invert	
Volume	0-99
Map	11 Types
Colorize	On, off
Tint	20 Types
Strip size	Full, large, Med., small
Auto(One-key Optimization)	Gain, DR or Scale/Baseline, user configurable
Acoustic Power	10%-100%, 10%/step
CW velocity	Max. 72m/s
	Min. 1cm/s

CW Mode (Post-Processing & Retrospective)

- Gain
- Dynamic Range
- Colorize
- Map
- Baseline
- Angle Correct
- Invert
- Strip size

TVI Mode (Live imaging)

Image Type	HighFlow/MidFlow/LowFlow
Dual Live	B+ TVI
ROI size/position	Adjustable
Frequency	5 levels
Gain	0-100dB, 1dB/step
Line density	Low, Med, High
Persistence	Off, Low, Med, High
Smooth	5 levels
Wall Filter	Low, Med, High
Color Map	20 types
PRF	0.6- 3.5kHz
Baseline	25 levels
Threshold	0-100
Invert	On, off
Acoustic Power	10%-100%，10%/step

TVI Mode (Post-Processing & Retrospective)

- Zoom
- Baseline
- Color map
- Invert

TVD mode (Live imaging)

Image Type	HighFlow/MidFlow/LowFlow
Triplex	B+TVI+TVD
PRF	0.9- 5.9kHz
Frequency	5 levels
Gain	0-100dB, 1dB/step
Dynamic Range	10-70 dB, 5dB/step
Wall Filter	Low, Med, High
Sweep Speed	10 levels
Baseline	9 levels
Angle Correction	-80° to 80°
Quick Angle	-60°/0°/60°
Invert	On, Off

*Feature is subject to regulatory approval, and may not be available for sale in specific countries.

Volume	0-99
Map	11 types
Colorize	On, off
Tint	20 Types
Gate Size	0.5-40 mm
Strip size	Full, large, Med., small
Acoustic Power	10%-100%, 10%/step

TVD (Post-Processing & Retrospective)

- Gain
- Dynamic Range
- Colorize
- Map
- Baseline
- Angle
- Invert

3D/4Dmode (Live imaging)

Acquisition modes	3D, 4D
Visualization modes	Volume rendering, Multi-Slice
Multi-Slice	Max. 21 slices can be displayed on the same screen; Distance between each slice is 0.5-10.0mm
VOI size/Position	Adjustable
Render modes	Surface, Max.
3D clip	
Cut tools	Trace, Box, Eraser
Cut functions	Undo, Undo all, Redo
Display formats	Single 3D, Dual(A-plane + 3D), Quad(A/B/C Planes + 3D)
3D parameters	Threshold, Smooth, Brightness, Contrast, Tint
eFace	EDAN auto show face
4D frame rate	Max. 6vps

Elastography mode (Live imaging)

Opacity	1, 2, 3, 4 levels
Smooth	Off, Low, Med., High
Persistence	Off, Low, Med, High
Map	0-6
DR	0-5
Invert	On, Off

Elastography Mode (Post-Processing & Retrospective)

- Opacity
- Smooth
- Map
- DR
- Invert

Review and Post-Processing functions

Cine Review

- Frame by frame manual review
- Auto playback with 6-level speed adjustable
- Start frame and end frame are selectable for cine loop review.
- Independent cine review in Dual/Quad mode.
- Maximum cine memory depends on transducers and image parameters:
  - 100000 frames for B mode
  - 30000 frames for Color mode
  - 180s for M mode
  - 240s for PW/CW Doppler mode

Post-Processing Features

All the image/cine is stored in Raw Data format in local disk. The following Post-Processing features are available when in image/cine review of current exam or the stored exam.

- Adjusting imaging parameters
- Measurements
- Annotations
- Storing static image/ cine loop

*Feature is subject to regulatory approval, and may not be available for sale in specific countries.

Transducers and Biopsy Guide

Transducer Applications

Transducer		Applications	Transducer		Applications
C5-2Q		Abdomen Fetal / Obstetrics Urology Gynecology Musculoskeletal	E8-4Q		Fetal / Obstetrics Gyncecology Trans-vaginal Trans-rectal Urology
L12-5Q		Small parts Peripheral Vascular Abdomen Musculoskeletal	P5-1Q		Adult Cardiac Abdomen Pediatric Cardiac Adult Cephalic
L17-7HQ		Small Parts Peripheral Vascular Musculoskeletal	L17-7SQ		Intra-operative Musculoskeletal Peripheral Vascular
C5-1Q		Abdomen Fetal / Obstetrics Urology Gynecology Musculoskeletal	C6-2MQ		Fetal / Obstetrics Abdomen Gynecology
MC8-4Q		Pediatric Abdomen Neonatal Cephalic Musculoskeletal Peripheral Vascular	MC9-3TQ		Pediatric Abdomen Neonatal Cephalic Musculoskeletal Peripheral Vascular
E10-3BQ		Fetal / Obstetrics Gyncecology Trans-vaginal Trans-rectal Urology	E10-3HQ		Fetal / Obstetrics Gyncecology Trans-vaginal Trans-rectal Urology

*Feature is subject to regulatory approval, and may not be available for sale in specific countries.

P7-3Q		Adult Cardiac Pediatric Abdomen Pediatric Cardiac Neonatal cephalic			

Transducer Specifications

Transducer	C5-2Q	P5-1Q	L12-5Q	L17-7HQ	E8-4Q
Transducer Type	Convex	Phased	Linear	Linear	Intra-cavity
Bandwidth@ -20dB	1-7MHz	1-5MHz	3-13MHz	5-19MHz	3-12MHz
Centeral Frequency	3.5MHz	2.7MHz	8.0MHz	12.0MHz	6.2MHz
B Harmonic Frequencies(MHz)	H1~5/H2~7/ H3~5/ H4~6/H5~7	H1~4/H3~5 /H2~5/ H3~4/H4~5	H3~10/H7~13/ H8~13 /H9~12/H9~13	H5~15/H9~19/ H10-18/H11~19/H12~19	H3~8/H5~12/ H6~12/H7~12/ H8~12
B Fundamental Frequencies(MHz)	1~4/2~6/3~7/ 4~7/5~7	1~3/2~4/2~5/ 3~5/4~5	3~8/5~10/7~13 /8~12/8~13	5~13/7~16/8~19/9~18/9~19	3~7/4~10/ 5~12/6~12/ 7~12
Spectrum Doppler Frequencies(MHz)	2.3/3.0/2.5/ 2.8/3.2	2.0/2.2/1.8/ 2.1/2.4	4.7/5.7/4.5/ 5.0/5.3	6.7/8.0/7.0/7.5 /7.8	3.6/5.0/5.2/5.3/ 5.5
Color Doppler Frequencies(MHz)	2.2/2.7/3.2/ 3.5/3.7	2.0/2.5/1.8/ 2.1/2.3	5.2/5.9/7.2/ 5.0/5.3	6.7/8.0/7.0/7.5 /7.8	3.6/4.7/5.0/4.0/ 5.5
Elements	128	64	128	192	128
Footprint	NA	16 mm	38mm	38mm	NA
Convex Radius	60mm	NA	NA	NA	10mm
FOV	60°	90°	NA	NA	150°
Display Depth	45cm	30cm	11cm	11cm	14cm
Biopsy Guide	Yes	Yes	Yes	Yes	Yes
Cable Length	2.0m	2.0m	2.0m	2.0m	2.0m

*Feature is subject to regulatory approval, and may not be available for sale in specific countries.

Transducer	C5-1Q	P7-3Q	L17-7SQ	MC8-4Q	MC9-3TQ
Transducer Type	Convex	Phased	Linear	Micro Convex	Micro Convex
Bandwidth@ -20dB	1-7MHz	2-8MHz	4-19MHz	3-10MHz	2-11MHz
Central Frequency	3.25MHz	5.0MHz	12.0MHz	6.2MHz	6.4MHz
B Harmonic Frequencies(MHz)	H1~5/H2~7/ H3~5/ H4~6/H5~7	H2~7/H4~9/ H5~9/ H6~8/H6~9	H5~15/H9~ 19/H10-18/ H11~19/ H12~19	H3~8/H4~9/ H5~9/ H5~10/H6~10	H2~9/H5~11/ H6~11/H6~10 /H7~11
B Fundamental Frequencies(MHz)	1~4/2~6/3~7/ 4~7/5~7	2~6/4~8/ 5~9/6~8/ 6~9	5~13/7~16/ 8~19/9~18/ 9~19	3~6/3~8/4~9/ 4~10/5~10	2~7/4~9/5~11 /6~10/7~11
Spectrum Doppler Frequencies(MHz)	2.3/3.0/2.5/ 2.8/3.2	2.7/3.8/2.9/ 3.2/3.5	6.7/8.0/7.0/ 7.5/7.8	4.2/5.0/4.4/ 4.6/4.8	3.6/4.5/3.8/ 4.0/4.2
Color Doppler Frequencies(MHz)	2.1/2.5/3.0/ 3.5/3.7	2.7/3.8/4.3/ 3.2/3.5	6.7/8.0/7.0/ 7.5/7.8	4.2/5.0/4.4/ 4.6/4.8	3.6/4.5/3.8/ 4.0/4.2
Elements	160	96	128	128	128
Footprint	NA	15 mm	26mm	NA	NA
Convex Radius	50mm	NA	NA	15mm	10mm
FOV	64°	90°	NA	100°	150°
Display Depth	45cm	18cm	11cm	15cm	15cm
Biopsy Guide	Yes	No	No	Yes	Yes
Cable Length	2.0m	2.0m	2.0m	2.0m	2.0m

*Feature is subject to regulatory approval, and may not be available for sale in specific countries.

Transducer	C6-2MQ	E10-3BQ	E10-3HQ
Transducer Type	Wobbler	Intra-cavity	Intra-cavity
Bandwidth@ -20dB	1-7MHz	3-12MHz	3-12MHz
Centeral Frequency	3.9MHz	6.5MHz	6.5MHz
B Harmonic Frequencies(MHz)	H1~5/H2~7/ H3~5/H4~6/H5~7	H5~6/H5~8/ H5~10/H6~11	H5~6/H5~8/ H5~10/H6~11
B Fundamental Frequencies(MHz)	1~4/2~6/3~7/ 4~7/5~7	3~7/4~10/5~12/ 6~12/7~12	3~7/4~10/ 5~12/6~12/7~12
Spectrum Doppler Frequencies(MHz)	2.6/3.0/2.5/ 2.8/3.2	3.6/4.8/5.0/ 5.2/5.5	3.6/4.8/5.0/ 5.2/5.5
Color Doppler Frequencies(MHz)	2.6/3.0/3.3/ 2.8/3.2	4.0/4.5/5.0/ 5.1/5.5	4.0/4.5/5.0/ 5.1/5.5
Elements	128	192	192
Footprint	NA	NA	NA
Convex Radius	40mm	14mm	14mm
FOV	64°	200°	200°
Display Depth	30cm	14cm	14cm
Biopsy Guide	No	Yes	Yes
Cable Length	2.0m	2.0m	2.0m

Biopsy Guide

- **Needle Guide**
  - Supports guide lines of multiple angles.
  - Supports single and parallel guide line.
  - Supports depth and length mark on guide line.
  - Support guide line calibration.
- **Need Visualization**
  - Supports three needle inserted angles for linear transducers.
- **Center Line**
  - Center Line is a vertical dotted line displayed at the middle of the image field, representing the middle of ultrasound beam. It helps to locate the position and depth of a target disease focus for out-of-plane biopsy, lithotripsy and etc.

*Feature is subject to regulatory approval, and may not be available for sale in specific countries.

- **Supported Needle Guided Brackets**

Model	Type	Angle/Depth	Description
BGK-CR10UA	In-plane	2°	For use with the E8-4Q, Supports: 16G, 18G
BGK-002	In-plane	38° , 46°, 58°	For use with the L12-5Q/L17-7HQ, Supports: 14G-23G
BGK-003	Out-of--plane	1.0cm, 1.5cm, 2.0cm	For use with the L12-5Q/L17-7HQ, Supports: 21G
BGK-004	In-plane	12°, 20°	For use with the MC9-3TQ, Supports: 14G-23G
BGK-005	In-plane	0°	For use with the E10-3BQ, Supports: 16G, 18G
BGK-006	In-plane	1°	For use with the E10-3HQ, Supports: 16G, 18G
BGK-008	In-plane	12°, 22°	For use with the P5-1Q, Supports: 14G-23G
BGK-009	In-plane	14°, 20°, 32°	For use with the C5-1Q Supports: 14G-23G
BGK-007	In-plane	18°, 25°, 35°	For use with the C5-2Q, Supports: 14G-23G
BGK-012	In-plane	11°, 20°, 37°	For use with the MC8-4Q, Supports: 14G-23G

*Feature is subject to regulatory approval, and may not be available for sale in specific countries.

Measurements

- Default measurement unit options
  - Distance: mm, or cm
  - Area: mm^2, or cm^2
  - Volume: mm^3, or cm^3
- Caliper Size: switch automatically according to the distance (3 sizes)
- Dynamic display of measurement results
- Reposition caliper
- Pre-categorized measurement groups based on clinical applications; Configurable in Measure Preset. Measured results of each measurement are configurable in Measure Preset.
- Measurements displayed on main screen and touch screen are consistent.

General Measurements

B-mode

- Distance (2-point)
- Circumference/Area (Ellipse, Trace, Spline)
- Angle(3-point)
- Volume(3-distance, Ellipse+ 1 distance)
- Stenosis
  - %Dist Stenosis (Distance)
  - % Area Stenosis (Ellipse, Trace, Spline)
- Vessel
  - Vessel Diamemter(2-point, Ellipse)
  - Volume flow area
  - IMT
- Color Velocity

M-mode

- Distance
- Time
- Slope
- HR
- Tei index: COT, ET

Doppler mode

- PS
- ED
- RI
- PI
- PS,ED,RI,S/D
- Time
- HR
- Manual Trace
- Spline Trace
- Auto Trace(Max. 15 measured results are configurable)
- Velocity
- PGMax
- PGMean
- Volume Flow
- Tei index: COT, ET
- dp/dt

Elastography mode

- Eratio(Ellipse, Trace)

Application Measurements/calculations

Abdomen

B-mode:

- Liver
  - Length, Width, Height
  - Volume(calculation)
  - Portal Vein Diameter
  - Common Hepatic Duct
- Gallbladder
  - Length, Height
  - Gallbladder Wall Thickness
  - Common Bile Duct
- Pancreas
  - Head, Body, Tail, Duct
- Spleen
  - Length, Height

*Feature is subject to regulatory approval, and may not be available for sale in specific countries.

- Renal
  - Length, Width, Height
  - Volume(calculation)
  - Renal Cortex Thickness
- Aorta Diameter
- Bladder
  - Pre-void bladder (Length, Width, Height)
  - Post-void bladder Length, Width, Height)

PW mode:

- 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

B-mode:

- Uterus
  - Length, Width, Height
  - Endometrium Thickness
  - UT Cavity
  - UT-L/CX-L(calculation)
- Cervix
  - Length, Width, Height
  - UT-L/CX-L(calculation)
- Ovary
  - Length, Width, Height
- Follicle
- Cyst
- Fluid POD

PW mode:

- Uterine Artery
- Ovary Artery

Obstetrics

B-mode:

• Fetal Biometry	BPD, HC, AC, FL, HUM, CER, OFD, NF, TAD, APAD, THD, APTD, TTD, FTA
• Early Gest	CRL, BPD, FL, HUM, NT, GS, YS, AF
• Long Bones	HUM, ULNA, RAD, TIB, FIB, Foot
• Fetal Cranium	CER, NT, NF, LVW, CM, NB
• AFI	Q1, Q2,Q3,Q4
• Chamber	LV Diam, LA Diam, RV Diam, RA Diam
• LVOT/AO	LVOT Diam, Ao Asc, Ao Arch, Ao Isthmus, Desc Ao
• RVOT/PA	RVOT Diam, MPA Diam, Ductus A
• CTAR	Area 1, Area 2

PW mode:

- MCA
- Umb. A
- Planenta A
- Ovary A
- Ut. A
- Fetal Ao
- Desc Aorta
- Ductus V
- FHR
- MV
- TV

- MPV
- Ductus A

M-mode:

FHR

Cardiac

B-mode

• LV Simpson	A4C Dias., A4C Sys., A2C Dias., A2C Sys.
• LV Study	LVSTd, LVIDd, LVPWd, IVSTs, LVIDs, LVPWs
• LV/RV	LVIDd, LVIDs, RVAWd, RVIDd
• Aorta	Ao Asc, AoD
• RVOT Diam	RVOT Diam
• LVOT Diam	LVOT Diam
• PV	PV Diam
• RVDs	RVDs
• LA/RA	RA length, RA Width, LA length, LA width
• LVM(A-L) (Left Ventricular Mass)	LVAd Sax Epi, LVAd Sax Endo, LVAd Apical
• LVM (T-E) (Left Ventricular Mass)	LVAd Sax Epi, LVAd Sax Endo, a, d
• LVM (Cube)(Left Ventricular Mass)	LVSTd, LVIDd, LVPWd
M-mode:	
• LV Study	LVSTd, LVIDd, LVPWd, IVSTs, LVIDs, LVPWs
• LV/RV	LVIDd, LVIDs, RVAWd, RVIDd
• Time	LVET, LV PEP, RV PEP
• Mitral Valve	MV D-E Exc, MV D-E Slope, E-F Slope, EPSS, MV E-E Sep, MV A-C Interval, MAPSE
• TAPSE	TAPSE
• LA/Ao	LA, AoR Diam, RVOT Diam
• HR	HR
• LVM (Cube)(Left Ventricular Mass)	LVSTd, LVIDd, LVPWd
• IVC-CI	IVCmax, IVCmin
PW mode:	
• Mitral Valve	E/A, MV PHT, MV VTI, IVRT, MV A Duration, MV DecT, MR Vmax, MR VTI, MV E Duration
• Tricuspid Valve	TV VTI, TV Vmax, TV E/A
• AV	LVOT VTI, LVOT Vmax, AV VTI, AV Vmax, AV Accel Time, AV Decel Time, AR VTI, AR Vmax, AR Accel Time, AR PHT, AR Decel Time
• PV	PV VTI, PV Vmax, PR Vmax, PV Accel Time
• PV Vein	PVein S Vel, PVein D Vel, PV A Vel, PV A Dur
• Hep Veins	Hep S Vel, Hep D Vel, Hep A Vel, Hep A Dur
• HR	HR
• TDI	Sa Medial, Ea Medial, Aa Medial, Sa Lateral, Ea Lateral, Aa Lateral

*Feature is subject to regulatory approval, and may not be available for sale in specific countries.

Urology

B-mode:

- Renal
  - Length, Width, Height
  - Renal Cortex Thickness
- Bladder
  - Pre-void Bladder (Length, Width, Height, volume)
  - Post-void Bladder (Length, Width, Height, volume)
- Prostate
  - Length, Width, Height
- Seminal
  - Length, Width, Height
- Testis
  - Length, Width, Height

PW mode:

- Renal Artery
- Arcuate Artery
- Segmental Artery
- Interlobar Artery

Small Parts

B-mode:

- Thyroid
  - Length, Width, Height
  - Thyroid Isthmus
- Breast
  - Lesion1, Lesion2, Lesion3, Lesion4, Lesion5
- Testis
  - Length, Width, Height

PW mode:

- Superior Thyroid Artery
- Inferior Thyroid Artery

Vascular

• Carotid	**B-mode:** Common Carotid Artery Intima-Media Thickness, Internal Carotid Artery Intima-Media Thickness, Carotid Artery Bifurcation Intima-Media Thickness **PW mode:** Common Carotid Artery, External Carotid Artery, Internal Carotid Artery, Vert Artery, Subclavian Artery, HR
• Upper Extremity Artery	**PW mode:** Subclavian Artery, Axillary Artery, Brachial Artery, Ulnar Artery, Radial Artery, HR
• Upper Extremity Vein	**PW mode:** Subclavian Vein, Axillary Vein, Brachial Vein, Cephalic Vein, Basilic Vein, Ulnar Vein, Radial Vein, Median Cubital Vein
• Lower Extremity Artery	**PW mode:** 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, HR
• Lower Extremity Vein	**PW mode:** Common Femoral Vein, Deep Femoral Vein, Superficial Femoral Vein, Common Iliac Vein, External Iliac Vein, Internal Iliac Vein, Great Saphenous Vein, Popliteal

*Feature is subject to regulatory approval, and may not be available for sale in specific countries.

		Vein, Peroneal Vein, Posterior Tibial Vein, Anterior Tibial Vein, Small Saphenous Vein
•	Stenosis%	**B mode:** Stenosis% Distance Stenosis% Area (Ellipse, Trace, Spline)
•	Volume Flow	**B mode:** Volume Flow Area **PW mode**: Volume Flow (TAMean, TAMax)
•	Cephalic	PW mode: Anterior Cerebral Artery, Middle Cerebral Artery, Posterior Cerebral Artery, Anterior Communicating Artery, Posterior Communicating Artery, Basilar Artery, Vertebral Artery, Internal Carotid Artery

Pediatrics

B-mode:

- Left lateral ventricle
- Right lateral ventricle
- left trigone
- right trigone
- Hip joint(with dislocation type)
  - HIP Angle
  - HIP d/D

Emergency

- EM Abd package
- EM OB package
- EM Card package

Reports

- Editable worksheet
- Report type: ABD, GYN, OB, URO, VAS, SMP, FETAL, CARD, PED, Nerve, MSK
- Comments/Findings section
- Supports fetal growth curve and grow bar display; supports data display of max. 4 fetus
- Supports Fetus Score *
- Supports data of multiple fetus
- User-imported Report Header
- User-defined hospital logo
- Multiple number of selected images
- Multiple layouts of image in report.
- Report Layout supports auto adjust.
- Support show or hide measure result
- Support zoom in preview
- Support Export as PDF format
- Support print by report printer.

Image Storage & Exam Archiving

Image Storage

- Static image/Cine clip is stored in local disk in RawData format.
- Two dedicated hard keys on the console for capturing static image and cine clips respectively.
- Cine clips supports prospective and retrospective storing.
- The length of cine clip is configurable.
- Prospective storing: max. 2 min length of clip can be stored in real-time scanning.
- Retrospective storing: all the clip data in the cine buffer can be stored in cine review mode, max.2 min.
- Supports up to 30,000(for 120GB hard disk) or 150,000(for 512GB hard disk) or350,000(for ITB hard disk) lossless single frames

*Feature is subject to regulatory approval, and may not be available for sale in specific countries.

- Supports cine clips exported:
  - Up to 100000 frames for B mode
  - Up to 30000 frames for Color mode
  - Up to 180s for M
  - Up to 240s for PW/CW mode

Exam Database

Support exam storage without patient information

Support exam query

Support review current exam or prior exam

Support review images of an exam

Support review report of an exam

Support export images as BMP, JPEG, TIFF, Raw Data or DICOM format

Support export cine clip as AVI, MP4, WMV, Raw Data or DICOM format

Support export Report as PDF format

Support export exams

Support compare images

Exam Archiving

All Clips and Static images stored on the system are stored internally in Raw Data format. They can be archived to other storage device for long-term storage as described below.

- Archived to DICOM server.
- Archived to FTP server.
- Archived to USB device.

  Note: If a clip length exceeds 3s, when selecting to export in DICOM format to a DICOM server or USB stick, only the last 3s of the clip will be exported for this release.
- Burned to DVD disk
- Sent to mobile devices.

Connectivity

Network

- Wired network connection
- Wi-Fi connection

DICOM 3.0 Service

- DICOM Storage
  - Connectivity to DICOM server for storage of all static images or cine clips with patient information.
  - Manual-Transfer in background on Demand.
  - Auto-Transfer when store or at exam end.
  - Transfer management UI for viewing transfer task status, retransferring a task or deleting a transfer task.
  - Transfer process encrypted.
  - Supports Structured Report transferring: OB, GYN, Cardiac and Vascular.
- DICOM Modality Worklist
  - Enables query of the patient worklist schedule from hospital information system to the ultrasound system via DICOM network connection.
  - Query of worklist on demand or on start of exam.
  - Populates the Patient Information screen with patient demographic information automatically when one patient is selected.

FTP Network Store Service

- Supports to transfer exams to FTP servers for storage in the background.
- Transfer management UI for viewing transfer task status, retransferring a task or deleting a transfer task.
- A PDF report can be sent to FTP server together with the exam.

*Feature is subject to regulatory approval, and may not be available for sale in specific countries.

CloudShare

- Supports sending image/clips to mobile devices by scanning the QR code on main screen when CloudShare icon is clicked.

Supported Peripherals

Printers

The system supports the connection of Video printers and report printers. The report can be connected locally via USB connector or remotely via network connection. Printer drivers can be imported to the system for the support of more report printers.

- Video printers
  - SONY UP-X898MD
  - SONY UP-D25MD
  - SONY UP-25MD
- Local report 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
  - EPSON L130
  - EPSON L3110
  - HP Color LaserJet Pro M254nw
- Network report printer

Safety and Regulatory

The Acclarix AX3 series Diagnostic Ultrasound System have been designed, manufactured and tested to comply with the following internationally recognized standards:

- 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 10993-1 Biological evaluation of medical devices — Part 1:Evaluation and testing within a risk management process sheet

*Feature is subject to regulatory approval, and may not be available for sale in specific countries.

www.edan.com

EDAN INSTRUMENTS, INC.
#15 Jinhui Road, Jinsha Community, Kengzi Sub-District
Pingshan District, 518122 Shenzhen, P.R.China
Email: info@edan.com