

Datasheet



# Acclarix AX3 VET series

Veterianry Diagnostic Ultrasound System



## **Revision History**

Version	Revisions	Date
1.0	Initial release	2019-7-3



This datasheet applies to Acclarix AX3 VET series Veterinary Diagnostic Ultrasound Systems, including Acclarix AX3 VET and Acclarix AX2 VET models. The configuration difference between each model is listed in the following table.

Models	Configuration Difference
IVIOLEIS	Socket Number
Acclarix AX3 VET	Double
Acclarix AX2 VET	Single



#### **Product Description**

The remarkable Acclarix AX3 VET series Compact Ultrasound System delivers powerhouse combination of features to meet the demands of point-of-care and general imaging applications. The Acclarix AX3 VET 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 Auto Optimization

Digital Multi-Beam forming

Trapezoid Imaging

Adaptive Doppler imaging

Spectrum Enhancement

**B** Steer

**Digital Zoom** 

Auto Doppler trace

#### **System Overview**

#### **System Architecture**

Memory

64 **Physical Channels** 

**Beam Forming** Quad beam

**Processor ARM** 2 GB

**Hard Drive** 120G SSD

**Operating System** Android

About 30s System Boot-up

Boot-up from sleep 5s

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) 5.24kg

(two transducer ports)

#### 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

#### **Battery**

- Rechargeable
- Max. two batteries configurable
- 5000mAh capacity for each battery
- Removable
- 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.
- Standby time: > 4 hours (two batteries)
- One battery fully charged in about 2.5 hours
- Two batteries fully charged in about 5 hours.
- Battery indicator on the console near the handle.
- Battery level icon displayed on the main screen.

#### **AC Power Requirements**

Voltage  $100 - 240 \text{ V}^{\sim}$  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

#### I/O Ports

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

#### **Options**

- Transducers
- Needle Guide Bracket Kits
- Printers
- Battery
- USB Disk
- WIFI
- Footswitch
  - Single button/Double buttons
  - User-defined Functions(Freeze, Save, Print)
- Simple Cart: MT-808
  - Height Variable
  - 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



#### **System Ergonomic Design**

#### **Dual Transducer Ports**

Dual active transducer ports design enables switching transducer seamlessly at a finger tip, and reduce 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

#### **Touch Screen**

- 10.1" Touch screen
- Gesture-control
- Virtual TGC sliders
- Support QWERTY keyboard for text input
- Brightness adjustable

#### **Main Screen Display**

#### **Information Field**

- EDAN logo
- Hospital name
- Date
- Time
- Patient ID
- Patient Name
- Owner Name
- Patient Gender
- Patient Age

- Transducer model
- Exam Preset

#### **Image Field**

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

#### Mini Report

- Measurement and calculation results

#### **Thumbnail Field**

- All captured static images and cine clips
- Shortcut keys for selecting, viewing, deleting, exporting images.

#### **User Feedback Field**

- Virtual trackball and trackball keys
- Cine bar
- Exit icon for exiting RawData review status.

#### **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



#### **Exam Presets**

- System pre-defined exam presets include(Transducer specific):
  - Large Canine
  - Medium Canine
  - Small Canine
  - Large Feline
  - Small Feline
  - Bovine
  - Ovine
  - Equine
  - Others
  - Canine Obstetrics
  - Feline Obstetrics
  - Bovine Obstetrics
  - Equine Obstetrics
  - Other Obstetrics
  - Equine Reproduction
  - Small Cardiac
  - Large Cardiac
  - Small Parts
  - Vascular
  - Superficial
  - MSK
  - Equine MSK
  - Equine Frog
  - Equine Pastern
  - Equine Tendon Ligament
  - Equine Joint
- 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.

#### **Annotations**

#### **Comments**

- User-programmable home position
- Arrow with user controlled orientation
- QWERTY keyboard
- Block move and delete for separate blocks of text
- Smart text replacement for predefined text (e.g., Long replaces Trans with one keystroke)
- 185 pre-defined comments
- User customizable

#### **Body Mark**

• Up to 45 Body Mark graphics in library



## **Imaging**

#### **Imaging Modes**

B-mode

M-mode

**Color Doppler** 

PDI/DPDI

**PW Doppler** 

**CW** Doppler

#### **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

#### **Imaging Mode Combinations**

- B+M
- B/C(PDI or DPDI), Single
- B/C(PDI or DPDI), Dual
- B+B/C(PDI or DPDI), Dual live
- B+PW (Duplex)
- B+PW (Update)
- B/C(PDI or DPDI)+PW (Triplex)
- B/C(PDI or DPDI)+PW (Update)
- B+CW (Update)
- B/C(PDI or DPDI)+CW (Update)

#### **Imaging Parameters**

#### B- mode(Live imaging)

Image Type	Detail/General/Penetration
Auto	TGC, Gain
Digital Zoom	x0.8-x2.0
Display Depth	1-45cm
Frequency	1-17MHz
	3 fundamental + 2 harmonic
eSRI	Off, Low, Med, High
FOV	Small, Med, Large, Full
Steer	0°, ±10°
Gain	0-100dB
TCG	8 segments
Dynamic Range	40-96dB
Line Density	Low, Med, High
Max. Frame Rate	551f/s, depends on transducer
Мар	11 Types
Persistence	Off, Low, Med, High
Persistence Focus Position	Off, Low, Med, High  Max. 16 positions, adjustable
Focus Position	Max. 16 positions, adjustable
Focus Position Focus Number	Max. 16 positions, adjustable 1-3, adjustable
Focus Position Focus Number Colorize	Max. 16 positions, adjustable 1-3, adjustable On, off
Focus Position Focus Number Colorize Tint	Max. 16 positions, adjustable 1-3, adjustable On, off
Focus Position Focus Number Colorize Tint Up/Down Flip	Max. 16 positions, adjustable 1-3, adjustable On, off
Focus Position Focus Number Colorize Tint Up/Down Flip Left/Right Flip	Max. 16 positions, adjustable 1-3, adjustable On, off 5 Types
Focus Position Focus Number Colorize Tint Up/Down Flip Left/Right Flip Spatial	Max. 16 positions, adjustable 1-3, adjustable On, off 5 Types
Focus Position Focus Number Colorize Tint Up/Down Flip Left/Right Flip Spatial Compounding	Max. 16 positions, adjustable  1-3, adjustable  On, off  5 Types  On, off (max 3angles)

#### B- mode(Post-processing & retrospective)

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



ging)	Color Map	8 Types		
Sweep Speed Fast/High/Med/Low/ Slow		0°,±10°, ±20° (L12-5Q)		
Corresponds to sweep time of		0°, ±15°, ±30°(L12-5Q, small		
1s, 2s, 4s, 8s and 12s per screen		canine, large feline, small feline,		
respectively.		feline OB, SMP, others)		
Off, Low, Med, High		0°,±5°,±10° (L17-7Q)		
11 Types	PRF	0.6- 11.4kHz		
On, off	Baseline	25 levels		
5 Types		(Not available for PDI mode)		
0-100dB	Threshold	0-100		
1-17MHz	Invert	On, off		
3 fundamental + 2 harmonic		(Not available for PDI mode)		
40-96 dB	Acoustic Power	10%-100%		
Full, large, Med., small				
On(Left/Right)	Color/PDI/DPDI	Mode (Post-Processing &		
Off(Up/Down)	Retrospective)			
10%-100%	• Zoom			
cessing & retrospective)	• Color map			
• Gain		<ul> <li>Invert (Not available for PDI mode)</li> </ul>		
	<ul> <li>Baseline</li> </ul>			
e				
	PW mode(Live im	aging)		
	Image Type	HighFlow/MidFlow/LowFlow		
	HPRF	Automatic invocation to		
		maintain gate location/scale		
ode(Live imaging)	Auto Trace			
HighFlow/MidFlow/LowFlow	Trace Side	Up, down, both		
	Duplex			
Adjustable	Triplex			
2 levels	Frequency	2 levels		
0-100dB	PRF	0.9- 14.7kHz		
Low, Med, High	Gain	0-100dB		
10-70 dB	Dynamic Range	10-70 dB		
Not available for Color mode	Wall Filter	Low, Med, High		
257f/s, depends on transducer	Sweep Speed	Fast/High/Med/Low/ Slow		
, , ,				
Off, Low, Med, High		Corresponds to sweep time of		
· · · · · · · · · · · · · · · · · · ·		Corresponds to sweep time of 2s, 3s, 4s, 6s and 8s per screen		
Off, Low, Med, High				
	Corresponds to sweep time of 1s, 2s, 4s, 8s and 12s per screen respectively.  Off, Low, Med, High  11 Types  On, off 5 Types  0-100dB  1-17MHz 3 fundamental + 2 harmonic  40-96 dB  Full, large, Med., small  On(Left/Right) Off(Up/Down)  10%-100%  cessing & retrospective)  e  Adjustable 2 levels 0-100dB  Low, Med, High 10-70 dB  Not available for Color mode	Fast/High/Med/Low/ Slow Corresponds to sweep time of 1s, 2s, 4s, 8s and 12s per screen respectively. Off, Low, Med, High  11 Types On, off 5 Types 0-100dB 1-17MHz 3 fundamental + 2 harmonic 40-96 dB Full, large, Med., small On(Left/Right) Off(Up/Down) 10%-100% cessing & retrospective)  PW mode(Live imaging) HighFlow/MidFlow/LowFlow Adjustable 1-17plex Adjustable 2 levels PRF  Low, Med, High 10-70 dB Not available for Color mode  Verseen  Steer Angle		



Angle Correction	-80° to 80°			
Quick Angle	-60°/0°/60°			
Steer	0°,±10°, ±20° (L12-5Q)			
	0°, ±15°, ±30°(L12-5Q, small			
	canine, large feline, small feline,			
	feline OB, SMP, others)			
	0°,±5°,±10° (L17-7Q)			
Invert				
Volume	0-99			
Мар	11 Types			
Colorize	On, off			
Tint	5 Types			
Gate Size	0.5-20 mm			
Strip size	Full, large, Med., small			
Acoustic Power	10%-100%			

#### **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
Dynamic Range	10-70 dB
Wall Filter	Low, Med, High
Sweep Speed	Fast/High/Med/Low/ Slow
	Corresponds to sweep time of
	2s, 3s, 4s, 6s and 8s per screen
	respectively.
Baseline	9 levels
Angle Correction	-80° to 80°
Quick Angle	-60°/0°/60°
Invert	
Volume	0-99
Мар	11 Types
Colorize	On, off
Tint	5 Types
Strip size	Full, large, Med., small
Acoustic Power	10%-100%

#### **CW Mode (Post-Processing & Retrospective)**

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



## **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 mode.
- Maximum cine memory depends on transducers and image parameters:
  - 200000 frames for B mode
  - 35000 frames for Color mode
  - 180s for M mode
  - 240s for PW/CW Doppler mode

#### **Post-Processing Features**

All the image/cine are 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
- Storing static image/ cine loop



## **Transducers and Biopsy Guide**

## **Transducer Applications**

7	Transducer	Applications	Transducer		Applications
C5-2Q		Large Canine, Bovine, Ovine, Equine, Canine OB, Bovine OB, Ovine OB, Equine OB, Other OB, Equine MSK, Equine Frog	L12-5Q	***************************************	Small Canine, Large Feline, Small Feline, Feline OB, Small Parts, Vascular, Superficial, MSK, Equine Tendon Ligament, Equine Joint
L17-7Q	Plan	Small Parts, Vascular, Superficial, MSK, Equine Tendon Ligament, Equine Joint	P5-1Q	C. S.	Small Cardiac, Large Cardiac
P7-3Q		Small Cardiac, Large Cardiac	MC8-4Q		Large Canine, Medium Canine, Small Canine, Large Feline, Small Feline, Canine OB, Feline OB, Bovine OB, Ovine OB, Equine OB, Other OB, Small Cardiac, Large Cardiac, Equine Pastern
MC9-3TQ		Large Canine, Medium Canine, Small Canine, Large Feline, Small Feline,	VEL12-5Q		Bovine OB, Ovine OB, Equine OB, Other OB, Equine



	Canine OB, Feline		Reproduction,
	OB, Bovine OB,		Equine MSK
	Ovine OB, Equine		
	OB, Other OB,		
	Small Cardiac,		
	Large Cardiac,		
	Equine Pastern		
VEL8-3WQ	Bovine OB, Ovine		
	OB, Equine OB,		
	Other OB, Equine		
	Reproduction,		
	Equine MSK		

## **Transducer Specifications**

Transducer	C5-2Q	P5-1Q	L12-5Q	L17-7Q	P7-3Q
Transducer Type	Convex	Phased	Linear	Linear	Phased
Bandwidth@-20dB	1-7MHz	1-5MHz	3-13MHz	4-19MHz	2-8Mhz
Bandwidth@ -6dB	2-5MHz	1-5MHz	5-12MHz	7-17MHz	3-7MHz
Elements	128	64	128	128	96
Footprint	NA	16 mm	38mm	38mm	15 mm
Convex Radius	60mm	NA	NA	NA	NA
FOV	60°	90°	NA	NA	90°
Max. Display Depth	45cm	30cm	11cm	11cm	18cm
Max. PW Velocity (±60°)	9m/s	10m/s	4.7m/s	3.2m/s	10m/s
Max. CW Velocity (±60°)	NA	75m/s	NA	NA	75m/s
Biopsy Guide	Yes	Yes	Yes	Yes	No
Cable Length	2 m/4m	2 m	2 m	2 m	2 m



Transducer	MC8-4Q	MC9-3TQ	VEL8-3WQ	VEL12-5Q
Transducer Type	Mirco Convex	Mirco Convex	Linear	Linear
Bandwidth@-20dB	3-10MHz	2-11MHz	2-9MHz	3-13MHz
Bandwidth@ -6dB	4-8MHz	3-9MHz	3-8MHz	5-12MHz
Elements	128	128	128	128
Footprint	NA	NA	57mm	38mm
Convex Radius	15mm	10mm	NA	NA
FOV	NA	NA	NA	NA
Max. Display Depth	15cm	15cm	18cm	11cm
Max. PW Velocity (±60°)	5m/s	6m/s	7m/s	4.75m/s
Max. CW Velocity (±60°)	NA	NA	NA	NA
Biopsy Guide	Yes	Yes	No	No
Cable Length	2 m/4m	2 m	2 m	2 m/4m



#### **Biopsy Guide**

#### • Needle Guide

- Supports guide lines of multiple angles.
- Support guide line calibration .

#### 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

#### • Supported Needle Guided Brackets

Model	Angle/Depth	Description
20% 20% 40%		For use with the C5-2Q,
BGK-C5-2	20°, 28°, 40°	Supports: 14G-23G
DCK LAOUD	248 428 528 668	For use with the L17-7Q,
BGK-L40UB	34°, 43°, 53°, 66°	Supports: 14G-23G
DCK D4511D	420 200 250	For use with the MC8-4Q,
BGK-R15UB	12°, 20°, 35°	Supports: 14G-23G
DCK 001	1.0 1.5 2.0	For use with the L17-7Q,
BGK-001	1.0cm, 1.5cm, 2.0cm	Supports: 21G
		For use with the L12-5Q,
BGK-002	38°, 46°, 58°	Supports: 14G-23G
	10 15 20	For use with the L12-5Q,
BGK-003	1.0cm, 1.5cm, 2.0cm	Supports: 21G
	120 200	For use with the MC9-3TQ,
BGK-004	12°, 20°	Supports: 14G-23G
	12° 22°	For use with the P5-1Q,
BGK-008 12°, 22°		Supports: 14G-23G



#### Measurements

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)

• Dynamic display of measurement results

• Reposition caliper

#### **General Measurements**

#### **B-mode**

Distance

• Circumference/Area (Ellipse, Trace)

Angle

Volume

Stenosis

- %Dist Stenosis (Distance)

- % Area Stenosis (Ellipse, Trace)

#### M-mode

Caliper

Distance

- Time

- Slope

HR

#### Doppler mode

V1, V2, Acceleration, Time, RI, S/D,
ΔV, PG1, PG2, PHT

PS, ED, MD, RI, PI, S/D, Time, TAMax,

• Trace VTI, AT, DT, PGmax, PGmean

PS, ED, MD, RI, PI, S/D, HR, Time,

Auto
TAMax, TAMean, VTI, AT, DT, PGmax,
Trace
PGmean

• HR HR

RI PS, ED, RI, S/D

TEI (only available for Cardiac preset)

• dp/dt (only available for Cardiac preset)

## 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

Renal

- Length, Width, Height

- Volume(calculation)

- Renal Cortex Thickness

Aorta Diameter

#### 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

#### Reproduction

#### 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
  - D1, D2, D3
  - Follicle-Mean
- Cyst
  - D1, D2, D3
- Fluid POD

#### PW mode:

- **Uterine Artery**
- **Ovary Artery**

#### **Obstetrics**

#### **B-mode:**

•	Canine	CRL, GSD, HD, BD, HD&BD
•	Feline	HD, BD
•	Bovine	CRL, TD, HD
•	Ovine	CRL, BPD
•	Equine	GSD-H, GSD-V
•	Fetal	RV Diam, RA Diam, RVOT Diam, LV
	Echo	Diam, LA Diam, LVOT Diam, Ao Asc,

Ao	Arch	Diam,	Ao	Isthmus,	Desc
Aor	ta, MF	A Diam	, Du	ctus A, CTA	AR.

#### PW mode:

FHR, MCA, Umb. Artery, Planenta Artery, Ductus Venosus, MV, TV, Fetal Echo MPV, Ovary Artery, Uterine Artery, Fetal Aorta, Desc Aorta, Ductus A

#### Cardiac

#### **B-mode**

<ul> <li>LV Simpson         A2C Sys., SV, EF, CO, SI, CI         RVAWd, RVIDd,IVSTd, LVIDd,</li></ul>		IV/Cinanaan	A4C Dias	., A4C Sys., A2	C Dias.,	
• Vent. Dim LVPWd, IVSTs, LVIDs, LVPWs	•	LV Simpson	A2C Sys., SV, EF, CO, SI, CI			
, , , ,	•	Vent. Dim	RVAWd,	RVIDd,IVSTd,	LVIDd,	
(Calculations:SV, EF, FS, CO, SI, CI)			LVPWd, IVSTs, LVIDs, LVPWs			
			(Calculation	ons:SV, EF, FS, CO	O, SI, CI)	

- Ao Asc
- **RVOT Diam**
- **LVOT Diam**
- HR
- **PV** Diam
- **RVDs**
- Length, Width RA
- Length, Width LA
- AoD

#### M-mode:

•	Vent. Dim	RVAWd,	RVIDd,	IVSTd,	LVIDd,
		LVPWd, IVSTs, LVIDs, LVPWs			
•	LVET				
•	MV	E-F Slope	e, EPSS		
•	LA/AO	LA, AoD,	RVOT Dia	ım	
PW	PW mode:				

•	TV	TV trace, TV Max
•	MV	A Dur, MV DecT
_	N 41) /	E/A, MV PHT, MV Trace, IVRT, MV



•	AoV	LVOT Trace, LVOT Vmax, AoV Trace, AoVVmax	•	Testis - Length	, Width, Height
•	PV	PV trace, PV Max	PW mode:  Superior Thyroid Artery  Inferior Thyroid Artery		
•	Pulmonic Vein	PVein S Vel, PVein D Vel, PV A Vel			
Ur	ology		Va	scular	
	node:				B-mode:
•	Renal	Market 11.			Common Carotid Artery Intima-Media Thickness, Internal
	_	, Width, Height			Carotid Artery Intima-Media
•	- Renal C Bladder	Cortex Thickness			Thickness, Carotid Arter Bifurcation Intima-Medi
	- Pre-voi volume	d Bladder (Length, Width, Height,	•	Carotid	Thickness
	- Post-vo	oid Bladder (Length, Width, Height,			PW mode:
	volume)				Common Carotid Artery, External
•	• Prostate				Carotid Artery, Internal Carotid  Artery, Vert Artery, Subclavian
	- Length, Width, Height				Artery, HR
•	Seminal				PW mode:
	- (Length	- (Length, Width, Height		Upper Extremity	Subclavian Artery, Axillary Artery, Brachial Artery, Ulnar Artery,
•	• Testis			Artery	Radial Artery, HR
	- Length	, Width, Height			PW mode:
PW	/ mode:		•	Upper	Subclavian Vein, Axillary Vein,
•	Renal Artery			Extremity	Brachial Vein, Cephalic Veir
•	Arcuate Artery			Vein	Basilic Vein, Ulnar Vein, Radial
Segmental Artery					Vein, Median Cubital Vein
Interlobar Artery					PW mode:
Sm	nall Parts				Common Femoral Artery, Deep

#### **Small Parts**

#### B-mode:

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

•	Carotid	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



PW mode:		
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		
PW mode:		
Anterior Cerebral Artery, Middle		
Cerebral Artery, Posterior		
Cerebral Artery, Anterior		
Communicating Artery, Posterior		
Communicating Artery, Basilar		
Artery, Vertebral Artery, Internal		
Carotid Artery		
B mode:		
Volume Flow Area		
PW mode:		
TAMean, Volume Flow (Calcu.)		

#### **Reports**

- Editable worksheet
- Comments section
- 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 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.6 min.
- Supports up to 30,000 lossless single frames
- Supports cine clips of :
  - Up to 200000 frames for B mode
  - Up to 35000 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 export images as  $\ensuremath{\mathsf{BMP}}$  ,  $\ensuremath{\mathsf{Raw}}$  Data or DICOM format

Support export cine clip as Raw Data format

Support export exams(including patient information, 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 in DICOM format.(Archiving Clip to DICOM server is not available currently)
- Archived to USB device in either DICOM, Raw Data or .bmp format.

### Connectivity

#### Network

- Wired network connection
- Wi-Fi connection

#### **DICOM 3.0 Service**

- DICOM Storage
  - Connectivity to DICOM server for storage of all static image with patient information.
  - Manual-Transfer in background or Demand
  - Transfer management UI for viewing transfer task status
- 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.

#### **Supported Peripherals**

#### **Printers**

- Video printers
  - SONY UP-X898MD
  - SONY UP-D25MD
  - 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
  - EPSON L130



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