# LOGIQ V5 Expert Ultrasound System

Specification sheet





LOGIQ<sup>™</sup> V5 Expert is a multipurpose ultrasound imaging system designed for imaging of Obstetric, GYNecological, Abdominal, Small Parts, Vascular/Peripheral Vascular, Urological, Pediatric, Trans-cranial and Cardiac applications.

# General specifications

#### Dimensions and Weight

Height with 15"LCD

• Fixed 1344 mm (52.91 in)

#### Width

- Keyboard: 455 mm (17.9 in)
- Caster: 430 mm (16.9 in)

Depth

- Maximum: 722mm (28.43 in)
- Caster: 605 mm (23.82 in)

Weight

• 15" Monitor- 43kg

#### **Electrical Power**

Voltage 100-240 VAC

Frequency 50/60 Hz

Power Consumption Maximum of 300 VA with Peripherals

#### Console Design

Standard 3 Active Probe Ports

1 Parking Port

Integrated HDD (500GB)

**Integrated Speakers** 

3 Probe Holders, Removable for Clean and Washing

Gel Holder, Removable for Clean and Washing

Front and Rear Handles

Probe Cable Tray

Probe Cable Management Slots

Easily Removable Air Filters

#### Wheels

Wheel Diameter: 120mm

Locking mechanism that provides rolling lock and caster

swivel lock

#### User interface

#### Operator Keyboard

Ergonomic Full Size Keyboard

8 TGC Slider Segments

#### Monitor

15" (381 mm) High-Resolution LCD (1024X768 pixels)

#### Fixed Monitor Arm

Tilt/Rotate

- Tilt Angle: 90° to +25°
- Rotate Angle: 60° to +60°

Fold-Down and Lock Mechanism for Transportation

Brightness and Contrast Adjustment

# System Overview

#### **Applications**

Abdominal

Obstetrical

GYNecological

**Small Parts** 

Musculoskeletal

Vascular/ Peripheral Vascular

Urological

Pediatric

Transcranial

Cardiac

#### Scanning Methods

Electronic Convex

Electronic Linear

Electronic Micro Convex

**Electronic Sector** 

Mechanic Volume Sweep

#### Transducer Types

Convex Array

Linear Array

Micro convex Array

Sector Phased Array

Volume Probes (4D)

#### **Operating Modes**

**B-Mode** 

Coded Phase Inversion Harmonic Imaging

M-Mode

Anatomical M-Mode (Option)

Color M Mode

Color Flow Mode (CFM)

Power Doppler Imaging (PDI)

**Directional PDI** 

PW Doppler with High PRF

CW Doppler Mode (Option)

3D Volume Modes (Option)

#### System Standard Features

AO (Automatic Optimization)

CrossXBeam™\*

SRI-HD (High Definition Speckle Reduction Imaging)

B-Steer

Coded Phase Inversion Harmonic Imaging

**Virtual Convex** 

Patient Information Database

Image Archive on Integrated HDD

Raw Data Analysis (TruScan Architecture)

Scan Coach

My Trainer

Real-Time Automatic Doppler Calculations

**OB** Calculations

**Fetal Trending** 

**Multigestational Calculations** 

Hip Dysplasia Calculations

**GYNecological Calculations** 

Vascular Calculations

**Urological Calculations** 

**Renal Calculations** 

Cardiac Calculations

Remote capability: InSite ExC

On-board reporting package (Option)

**MPEGVue** 

Network Storage

# **System Options**

In Some Systems and in Some Regions, the following may be Optional

LOGIQ View

CW Doppler

Anatomical M-Mode

Easy 3D

Static 3D

Auto IMT

SonoBiometry (BPD, HC, AC, FL)

Report

DICOM 3.0 Connectivity

#### Peripheral Options

Fixture kit for Digital UP-D711MD Thermal Printer

Digital UP-D711MD B/W Thermal Printer

UP-D 711MD Printer Paper

Digital UP-D25MD Color Thermal Printer

Digital UP-D898MD B/W Thermal Printer with Fixture Kit

1-Pedal Type Footswitch 'Whanam FSU-1000'

Footswitch MKF 2-MED USB GP26

USB Stick 8G

1TB Mobile USB HDD

USB DVD RW Kit

USB ECG Kits (AHA/IEC)

**USB Wireless Adaptor** 

Cable Tray

#### Display Modes

Live and Stored Display Format:

Wide Screen

• Full Size and Split screen – Both with Thumbnails for Still and Cine

Review Image Format: 4x4 and Thumbnails for Still and Cine

Simultaneous Capability

- Dual B (B/B)
- B/CFM or PDI
- B/PW or B/CW or B/M
- B + CFM/M
- Real Time Triplex Mode (B + CFM or PDI+PW or CW)
- B or CrossXBeam/PW
- B or CrossXBeam/CFM or PDI
- B/M
- B/CrossXBeam
- Real-Time Triplex Mode (B or CrossXBeam + CFM or PDI/PW)

#### Selectable Alternating Modes

B or CrossXBeam/PW

B or CrossXBeam + CFM (PDI)/PW (CW (Option))

B + CFM (PDI)/PW (CW)

Easy 3D-Mode

Multi-Image Split Screen (Quad Screen)

Live and/or Frozen

B or CrossXBeam + B or CrossXBeam/CFM or PDI

PW/M

Independent CINE Playback

Time Line Display

Independent Dual B or CrossXBeam/PW Display

**CW Display Formats** 

- Top/Bottom Selectable Format
- Side/Side Selectable Format

Virtual Convex

Timeline Only

Zoom: Write (HD)/Read 20X

Colorized Image

- Colorized B
- Colorized M
- Colorized PW
- Colorized CW
- Colorized 3D

#### Timeline Display

Independent Dual B/PW or CW Display

**Display Formats** 

- Top/Bottom Selectable Format (Size: 1/2:1/2; 1/3:2/3; 2/3:1/3)
- Side/Side Selectable Format (Size: 1/2:1/2; 1/4:3/4; TL only)

# **Display Annotation**

#### General User Interface

Patient Name: First, Last (Max 28 characters displayed per each, Up to 64 total characters per each)

Patient ID (Max 64 Characters)

Other ID (Max 64 Characters)

Age, Sex and Date of Birth

Hospital Name (Max 23 Characters Displayed)

Date format: 3 Types Selectable

- MM/DD/YY
- DD/MM/YY
- YY/MM/DD

Time Format: 2 Types Selectable

• 24 Hours

#### General User Interface Continued..

• 12 Hours

Gestational Age from

- LMP GA
- EDD BBT

**Displayed Acoustic Output** 

- TIS: Thermal Index Soft Tissue
- TIC: Thermal Index Cranial (Bone)
- TIB: Thermal Index Bone
- MI: Mechanical Index

% of Maximum Power Output

Probe Name

Map Names

**Probe Orientation** 

Depth Scale Marker

Lateral Scale Marker

Focal Zone Markers

Image Depth

Zoom Depth

#### **B-Mode**

Gain

Dynamic Range

**Imaging Frequency** 

Edge Enhance

Frame Averaging

Acoustic Frame Rate

Gray Map

ATO On/Off

SRI-HD

CrossXBeam

#### Adjustable

Acoustic Power

Gain

Dynamic Range

Frame Averaging

Gray Scale Map

Frequency

Line Density

Scanning Size (FOV or Angle – Probe Dependent,

See Probe Specifications)

**B** Colorization

Reject

Suppression

SRI-HD

Edge Enhance

#### M-Mode

**Acoustic Power** 

Gain

Dynamic Range

Gray Scale Map

Sweep Speed

**M** Colorization

M Display Format

Rejection

#### Color Flow Mode

Line Density

Frame Averaging

Packet Size

Color Velocity Range and Baseline

Color Threshold Marker

Color Gain

Inversion

#### PDI mode

Line Density

Frame Averaging

Packet Size

Power, Directional PDI

Color Velocity Range and Baseline

Color Threshold Marker

PDI Gain

Inversion

#### Doppler Mode

Gain

Angle

Sample Volume Depth and Width

Wall Filter

Velocity and/or Frequency Scale

Spectrum Inversion

Time Scale

PRF

**Doppler Frequency** 

#### Anatomical M-Mode (Option)

M-Mode cursor adjustable at any plane

Can be activated from a Cine loop from a live or stored image

Available with Color Flow Mode

#### Pulse Wave Doppler Mode

Adjustable

**Acoustic Power** 

Gain

Gray Scale Map

Transmit Frequency

Wall Filter

**PW Colorization** 

Velocity Scale Range

Sweep Speed

Sample Volume Depth

**Angle Correction** 

Spectrum Inversion

Trace Method

**Baseline Shift** 

Doppler Auto Trace

Compression

**Trace Direction** 

Trace Sensitivity

#### Color Flow Mode

Adjustable

**Acoustic Power** 

Color Maps, Including Velocity-Variance Maps

Gain

Velocity Scale Range

Wall Filter

Packet Size

Line Density

Spatial Filter

Steering Angle

Baseline Shift

Frame Average

Threshold

Accumulation Mode

Sample Volume Control

Flash Suppression

#### **Power Doppler Imaging**

Adjustable

**Acoustic Power** 

Color Maps

**Directional Map** 

Gain

Velocity Scale Range

Wall Filter

Packet Size

#### Power Doppler Imaging Continued..

Line Density

Spatial Filter

Steering Angle

Frame Average

Threshold

Accumulation Mode

Sample Volume Control

Flash Suppression

#### Continuous Wave Doppler (Option)

Adjustable

**Acoustic Power** 

Gain

Gray Scale Map

**Transmit Frequency** 

Wall Filter

**CW Colorization** 

Velocity Scale Range

Sweep Speed

**Angle Correction** 

Spectrum Inversion

Trace Method

**Baseline Shift** 

Doppler Auto Trace

Compression

**Trace Direction** 

**Trace Sensitivity** 

#### Automatic optimization

Optimize B-Mode Image to Enhance Contrast Resolution Selectable Amount of Contrast Resolution Enhancement (Low, Medium, High)

**Auto-Spectral Optimize Adjusts** 

- Baseline
- Invert
- Scale (On Live Image)

#### Coded Harmonic Imaging

Coded Phase Inversion Harmonic Imaging

Available on All Probes

#### LOGIQ View

Extended Field of View Imaging

Available on 4C-RS, L6-12-RS, 12L-RS, 3Sc-RS, E8C-RS, E8C-RS, 6S-RS, 8C-RS

For Use in B-Mode

#### LOGIQ View Continued...

CrossXBeam is Available on Linear Probe

Auto Detection of Scan Direction

Post-Process Zoom

Auto Fit on Monitor

Measurements in B-Mode

#### Easy 3D

Allows Unlimited Rotation and Planar Translations

3D Reconstruction from Cine Sweep

- Utilities
- Texture
- GreySurface
- Render
- Threshold1
- Threshold2
- ScanDistance
- Colorize

#### Scan Coach

Modules showing basic scanning techniques with graphic of beam formation, indicative probe position, schematic of anatomy and example clinical image

#### Virtual Convex

Provides a Convex Field of view

Compatible with CrossXBeam

Available on Linear and sector transducers

#### SRI-HD

High Definition Speckle Reduction Imaging

Provides Multiple levels of Speckle Reduction

Compatible with Side by Side DualView Display

Compatible with All Linear, Convex and sector transducers

Compatible with B-Mode, Easy 3D

#### CrossXBeam

Provides 4 levels of Spatial Compounding (Low, Medium, High, Max)

Live Side by Side DualView Display

Compatible with

- Color Mode
- PW
- SRI-HD
- Coded Harmonic Imaging
- Virtual Convex

Available on 4C-RS, L6-12-RS, 12L-RS, 3Sc-RS, E8C-RS, E8Cs-RS, 6S-RS, 8C-RS

#### 3D

Tile/Mix

**Active Curve** 

**Reset Curve** 

Lower Threshold

Volume Angle

**B** Quality

3D Orient

Render Mode

Colorize

Direction

Rend 1 Gray

Rend 2 Gray

Transparency

Ref Image

Cut Mode

Cut Depth

Depth

**Rotational Angle** 

Step Angle

**Rotation Axis** 

Start Angle

**End Angle** 

Loop Speed

# General System Parameters

#### System Setup

8 Pre-programmable Categories

User Programmable Preset Capability

Factory Default Preset Data

Languages: English, Latin American Spanish, French, German, Italian, Brazilian Portuguese, Swedish, Russian, Norwegian, Danish, Dutch, Finnish

OB Report Formats including Tokyo, Osaka, USA, Europe, and ASUM

**User Defined Annotations** 

**Body Patterns** 

**Customized Comment Home Position** 

#### **CINE Memory/Image Memory**

384 MB of Cine Memory

Selectable Cine Sequence for Cine Review

Prospective Cine Mark

Measurements/Calculations and Annotations on Cine Playback

Scrolling Timeline Memory

**Dual Image Cine Display** 

Quad Image Cine Display

Cine Gauge and Cine Image Number Display

Cine Review Loop

Cine Review Speed: 11 Steps

(11, 13, 14, 17, 22, 25, 31, 48, 100, 200, 400%)

#### Image Storage

On-Board Database of Patient Information

Storage Formats:

DICOM – Compressed/Uncompressed, Single/Multi-Frame, with/without Raw Data

Export JPEG, WMV (MPEG 4) and AVI formats

DICOM Still Image Storage Size: -2.1 MB

Display Format: Full Size, 4x4 and Thumbnails

#### **Storage Devices**

Internal Hard Drive Partition of 200 GB for Image Storage

External USB HDD and USB Memory Stick Support for Import, Export, DICOM Read, SaveAs, and MPEGVue

CD-RW Storage: 700 MB DVD Storage: -R (4.7 GB)

Conversion to Formats: JPEG, AVI, WMV

Live Image and Stored Image Side-by-Side Display

Reload of Archived Data Sets

Network Storage Support for Import, Export, DICOM Read, SaveAs, MPEGVue

#### Connectivity & DICOM

**Ethernet Network Connection** 

- DICOM 3.0 (Optional)
- Verify
- Print
- Store
- Modality Worklist
- Storage Commitment
- Modality Performed Procedure Step (MPPS)
- Query/Retrieve
- Structured Reporting Template which can be Compared to Vascular and OB Standard Values
- Remote Capability InSite ExC

#### **Scanning Parameters**

Digital Agile Beamformer Architecture

150,000 System Processing Channels

Max. Frame Rate: 1449 F/s (Probe and Mode Dependent)

Displayed Imaging Depth: 1 – 33 cm/Displayed Imaging

Depth: 1 - 33 cm

Minimum Depth of Field: 0 – 2 cm (Zoom) (Probe

Dependent)

Maximum Depth of Field: 1 – 33 cm (Probe Dependent)

Transmission Focus: 1 – 8 Focal Points Selectable (Probe

and Application Dependent)

**Quad Beamforming** 

Continuous Dynamic Receive Focus/Aperture

Multi-Frequency/Wideband Technology

Frequency Range: 1.6 to 13 MHz

256 Shades of Gray

261 dB systematic Dynamic Range

Adjustable Dynamic Range (36 - 96dB)

Adjustable Field of View (FOV): up to 168 degrees

(Probe Dependent)

Image Reverse: Right/Left

Image Rotation of 0°, 90°, 180°, 270°

#### B-Mode

Acoustic Power Output: 0 – 100%, 2, 5, and 10 Steps

Gain: from 0 - 90 dB, 1 dB Steps

Dynamic Range: 36 to 96dB, 36-48/78-96 6dB Step;

Adjustable Dynamic Range: 36 – 96 dB, 3 or 6 dB Steps

Frame Averaging: 8 Steps

Gray Scale Map: 6 or 8 Types (Probe Dependent)

B Colorization: 9 Types

Frequency: Up to 11 Selectable (Probe Dependent)

Line Density: 5 Steps

Line Density Zoom: 5 Steps

Thermal Index: TIC, TIS, TIB

Image Reverse: On/Off

Focus Number: 8 Steps

Focus Width: 3 Types

Suppression: 6 Steps

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Edge Enhance: 7 Steps

Rejection: 6 Steps

Steered Linear: ±12°±15° (Probe Dependent)

Scanning Size (FOV or Angle) - (Probe Dependent)

SRI-HD: Up to 8 Levels Selectable

CrossXBeam: Up to 9 Angles Selectable

Depth: 1-33 cm, 0.5 or 1 cm Step, (Probe Dependent)

#### Color Flow Mode

Baseline: 0 - 100%, 10% Steps

Invert: On/Off

CF/PDI Focus Depth: Default Pre-Settable for 10 - 100% of

ROI in Depth, 15% or 20% Step

CF/PDI Flash Suppression: 5 Steps

CF/PDI Angle Steer: 0, ±10°, ±15°, ±20°

Packet Size: 8 – 24. (Probe and Application Dependent)

Line Density: 5 Steps

Line Density Zoom: 5 Steps

Frame Average: 7 Steps

PRF: 0.1 - 20.8 KHz/22 Steps

Spatial Filter: 6 Steps

Gain: 0 - 40 dB, 0.5 dB Steps

Wall Filter: 4 Steps (Probe and Application Dependent)

Scanning Size (FOV or Angle): (Probe Dependent)

CF/PDI Vertical Size (mm) of ROI: Default Pre-Settable

CF/PDI Center Depth (mm) of ROI: Default Pre-Settable

CF/PDI Frequency: Up to 15 Steps (Probe Dependent)

Color Maps, including velocity-variance maps: 14 Types

(Application Dependent)

Transparent: 5 Steps

Color Threshold: 0 – 100%, 10% Steps

Accumulation: 8 Steps

Flash Suppression

#### Power Doppler Imaging

PDI Map: 14 Types

CF/PDI Focus Depth: Default Pre-Settable for 10 - 100% of

ROI in Depth, 15% or 20% Step

CF/PDI Acoustic Output: 0 – 100%, 2%, 5% or 10% Step

CF/PDI Angle Steer: 0, ±10°, ±15°, ±20°

Packet Size: 8 – 24, (Probe and Application Dependent)

Spatial Filter: 6 Steps

Frame Average: 7 Steps

PRF: 0.1 – 20.8 KHz/22 Steps

Power Threshold: 0 – 100%, 10% Steps

Gain: 0 - 40 dB, 0.5 dB Steps

Wall Filter: 4 Steps (Probe and Application Dependent)

CF/PDI Frequency: Up to 15 Steps (Probe Dependent)

Transparent: 5 Steps

Invert: On/Off

Accumulation: 8 Steps

#### M-Mode

Gain: -20 -20 dB, 1 dB Step

Gray Scale Map: 6 or 8 Types (Probe Dependent)

Colorization: 9 Types

Scanning Size (FOV or Angle - (Probe Dependent).

See probe specifications)

Rejection: 6 Steps

M/PW Display Format: V-1/3B, V-1/2B, V-2/3B, H-1/2B,

H-1/4B, Timeline only

#### Anatomical M-Mode (Option)

M-Mode Cursor Adjustable at Any Plane

Can be Activated from a Cine Loop from a Live or Stored Image

Measure & Analysis Capability

Available with Color Flow Mode

#### Pulse Wave Doppler Mode

Acoustic Power: 0 - 100%, 2, 5, and 10 Steps

Gain: 0 -85 dB, 1 dB Step

Gray Scale Map: Up to 8 Types

PRF: 0.3 - 27.9 KHz

Transmit Frequency: 1.7-10 MHz (Probe Dependent)

Wall Filter: 5.5 – 5000Hz, 27 Steps (Probe Dependent)

PW Colorization: Up to 6 Types

Velocity Scale Range: 0.1-3631cm/s cm/s

Sweep Speed: 0-7, 8 Steps

Sample Volume Depth: 0.2-33 cm (Probe Dependent)

SV Gate: 1, 2, 3, 4, 5, 6, 7, 8, 10, 12, 14, 16 mm

Angle Correction: -90-90, 1 Step

M/PW Display Format: V-1/3B, V-1/2B, V-2/3B, H-1/2B,

H-1/4B, Timeline only

Spectrum Inversion

Duplex: Simultaneous: On/Off (PW only)

PW Angle Steer: 0, ±10, 15, 20°

Sample Volume Depth: 206 Steps Default Pre-Settable,

(Probe Dependent)

Trace Method: Off, Max, Mean

Baseline Shift: 11 Steps

Doppler Auto Trace

Compression: 0.5-2.4(0.5,0.7,0.9,1,1.1,1.4,1.6,2,2.4)

Trace Direction: Above, Below, Both

Trace Sensitivity: 0-40, 2 Steps

#### Continuous Wave Doppler (Option)

Gray Scale Map: 8 Types

Baseline: 11 Steps

Angle Correct: ±90°, 1° Step

Spectral Color: 6 Types

Invert: On/Off

Spectral Averaging: 5 Steps

Gain: 0 - 85 dB, 1 dB Steps

Wall Filter: 5.5 – 5000Hz, 27 Steps, (Probe and Application Dependent)

CW-Mode includes:

- Transmit Frequency
- CW Colorization
- Velocity Scale Range: 0.2-6105cm/s
- Spectrum Inversion
- Trace Method
- Doppler Auto Trace
- Trace Direction
- Trace Sensitivity

#### **Automatic Optimization**

Optimize B-Mode Image to Improve Contrast Resolution

Selectable Amount of Contrast Resolution Improvement (Low, Medium, High)

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**Auto-Spectral Optimize Adjusts** 

- Baseline
- Invert
- PRF (On Live Image)

#### Coded Harmonic Imaging

Coded Phase Inversion Harmonic Imaging

Available on All Probes

Line Density: 5 Steps

Line Density Zoom: 5 Steps

Suppression: 6 Steps

Edge Enhance: 7 Steps

Gray Scale Map: 6 Types

Tint Map: 9 Types

Gain: 0 - 90 dB, 1 dB Step

Dynamic Range: 36 to 96dB 3dB Step; 36-48/78-96 6dB

Step;

Rejection: 6 Step

Frequency: Up to 4 Steps (Probe Dependent)

#### LOGIQ View (Option)

Extended Field of View Imaging

Available on 4C-RS, L6-12-RS, 8C-RS, 3Sc-RS, E8C-RS, E8Cs-RS, 12L-RS, 6S-RS probes

For Use in B-Mode

CrossXBeam is Available on Linear Probes

Auto Detection of Scan Direction

Post-Process Zoom

Rotation

Auto Fit on Monitor

Measurements in B-Mode

Up to 160cm Scan Length

#### Easy 3D (Option)

Allows Unlimited Rotation and Planar Translations

3D Reconstruction from Cine Sweep

Utilities: Average Off/Average Light/Average Medium/

**Average Strong** 

Grey Surface 0-100%

Threshold1 0-255

Threshold2 0-255

Scan Distance 1.0-15.0

Colorize 0-360

#### Static 3D (Option)

Static 3D Mode

Visualization Modes:

- 3D Rendering (Diverse Surface and Intensity Projection Modes)
- Sectional Planes (3 Section Planes Perpendicular to each other)

Render Mode: Surface Texture, Surface Smooth, max-, min-, X-ray, Mix Mode of Two Tender Modes

Display Format:

- Quad: A-/B-/C-Plane/3D
- Dual: A-Plane/3D
- Single: 3D

#### 3D Movie

LoopSpeed: 6-400

Run/Stop

Scalpel: 3D Cut Tool

Cut Mode: Inside Contour/OutSide Contour/Inside Box/

Outside Box/Small Eraser/Big Erase

Cut Depth: Full/UserDefine

Depth: 0-1000 3D Rotation Cine

Rotational Angle: 30-360

#### 3D Movie Continued..

Step Angle 1-15

Rotation Axis: X/Y

3D Volume Review

Start Frame: Define Start Frame

End Frame: Define End Frame.

Run/Stop

#### Scan Coach

Scan Coach is a contextual reference tool that provides clinical guidance for scan plane acquisition and references for anatomical structures. Clinical reference images and animations depict information related to each Step and can be displayed on demand by the user. Applications include abdomen, obstetric, gynecologic, carotid, and cardiac.

#### My Trainer

Abstracted from basic user manual, it lists FAQs from customers and instructs users how to solve problems on their own.

#### Virtual Convex

Provides a Convex Field of View

Compatible with CrossXBeam

Available on linear and sector transducers

#### SRI-HD

High Definition Speckle Reduction Imaging Provides Multiple levels of Speckle Reduction

Compatible with Side by Side DualView Display

Compatible with all linear, convex and sector transducers

Compatible with B-Mode, 3D/4D Imaging

#### CrossXBeam

Provides 3, 5, 7,9 levels of Spatial Compounding

Live Side by Side DualView Display

Compatible with:

- Color Mode
- PW
- SRI-HD
- Coded Harmonic Imaging
- Virtual Convex

Available on L6-12-RS, 12L-RS,4C-RS, 8C-RS, E8C-RS, E8Cs-RS

#### Controls Available While "Live"

Write Zoom

B/M/CrossXBeam-Mode

Gain

TGC

Dynamic Range

**Acoustic Output** 

**Transmission Focus Position** 

Transmission Focus Number

Line Density Control

Sweep Speed for M-Mode

Number of Angles for CrossXBeam

#### PW-Mode

Gain

Dynamic Range

**Acoustic Output** 

**Transmission Frequency** 

PRF

Wall Filter

Sample Volume Gate

- Length
- Depth

Velocity Scale

#### Color Flow Mode

CFM Gain

**CFM Velocity Range** 

**Acoustic Output** 

Wall Echo Filter

Packet Size

Frame Rate Control

**CFM Spatial Filter** 

**CFM Frame Averaging** 

Frequency/Velocity Base Line Shift

#### Controls Available on "Freeze" or Recall

**Automatic Optimization** 

SRI-HD

CrossXBeam - Display Non-Compounded and

Compounded

Image simultaneously in Split Screen

3D Reconstruction from a stored Cine Loop

B/M/CrossXBeam Mode

**Gray Map Optimization** 

TGC

Colorized B and M

#### Controls Available on "Freeze" or Recall Continued..

Frame Average (Loops Only)

Dynamic Range

Anatomical M-Mode

Sweep Speed

Gray Map

Baseline shift

Sweep Speed

Invert Spectral Wave Form

Compression

Rejection

Colorized Spectrum

Display Format

Doppler Audio

**Angle Correct** 

**Quick Angle Correct** 

Auto Angle Correct

Overall Gain (loops and stills)

Color Map

Transparency Map

Frame Averaging (Loops Only)

Flash Suppression

CFM Display Threshold

Spectral Invert for Color/Doppler

Anatomical M-Mode on Cine loop

# Measurements/Calculations

#### General B-Mode

Depth and Distance

Circumference (Ellipse/Trace)

Area (Ellipse/Trace)

Volume (Ellipsoid)

% Stenosis (Area or Diameter)

Angle between Two Lines

#### General M-Mode

M-Depth

Distance

Time

Slope

Heart Rate

#### General Doppler Measurements/Calculations

Velocity

Time

A/B Ratio (Velocities/Frequency Ratio)

PS (Peak Systole)

ED (End Diastole)

PS/ED (PS/ED Ratio)

ED/PS (ED/PS Ratio)

AT (Acceleration Time)

ACCEL (Acceleration)

TAMAX (Time Averaged Maximum Velocity)

Volume Flow (TAMEAN and Vessel Area)

Heart Rate

PI (Pulsatility Index)

RI (Resistivity Index)

#### Real-time Doppler Auto Measurements/Calculations

PS (Peak Systole)

ED (End Diastole)

MD (Minimum Diastole)

PI (Pulsatility Index)

RI (Resistivity Index)

AT (Acceleration Time)

ACC (Acceleration)

PS/ED (PS/ED Ratio)

ED/PS (ED/PS Ratio)

HR (Heart Rate)

TAMAX (Time Averaged Maximum Velocity)

PVAL (Peak Velocity Value)

Volume Flow (TAMEAN and Vessel Area)

# OB Measurements/Calculations

#### Gestational Age by:

GS (Gestational Sac)

CRL (Crown Rump Length)

FL (Femur Length)

**BPD** (Biparietal Diameter)

AC (Abdominal Circumference)

**HC (Head Circumference)** 

APTD x TTD (Anterior/Posterior Trunk Diameter by

Transverse Trunk Diameter)

FTA (Fetal Trunk Cross-Sectional Area)

HL (Humerus Length)

**BD** (Binocular Distance)

FT (Foot Length)

OFD (Occipital Frontal Diameter)

TAD (Transverse Abdominal Diameter)

#### Gestational Age by: Continued...

TCD (Transverse Cerebellum Diameter)

THD (Thorax Transverse Diameter)

TIB (Tibia Length)

**ULNA (Ulna Length)** 

#### Estimated Fetal Weight (EFW) by:

AC, BPD

AC, BPD, FL, HC

AC, FL, HC

BPD, APTD, TTD, FL

#### Calculations and Ratios

FL/BPD

FL/HC

CI (Cephalic Index)

CTAR(Cardio-Thoracic Area Ratio)

#### SonoBiometry

Includes 4 Measurements - BPD, HC, AC, HL

Measurements/Calculations by: ASUM, ASUM 2001, Berkowitz, Bertagnoli, Brenner, Campbell, CFEF, Chitty, Eik-Nes, Goldstein, Hadlock, Hansmann, Hellman, Hill, Hohler, Jeanty, JSUM, Kurtz, Mayden, Mercer, Merz, Moore, Nelson, Osaka University, Paris, Rempen, Robinson, Shepard, Shepard/ Warsoff, Tokyo University, Tokyo/Shinozuka, Yarkoni

#### Fetal Graphical Trending

**Growth Percentiles** 

Multi-Gestational Calculations (4)

Fetal Qualitative Description (Anatomical Survey)

Fetal Environmental Description (Biophysical Profile)

Programmable OB Tables

Over 20 Selectable OB Calculations

**Expanded Worksheets** 

#### **GYN Measurements/Calculations**

Right Ovary Length, Width, Height

Left Ovary Length, Width, Height

Uterus Length, Width, Height

Cervix Length, Trace

Ovarian Volume

**FNDO (Endometrial thickness)** 

Ovarian RI

Uterine RI

Follicular Measurements

Summary Reports

#### Vascular Measurements/Calculations

SYS DCCA (Systolic Distal Common Carotid Artery)

DIAS DCCA (Diastolic Distal Common Carotid Artery)

SYS MCCA (Systolic Mid Common Carotid Artery)

DIAS MCCA (Diastolic Mid Common Carotid Artery)

SYS PCCA (Systolic Proximal Common Carotid Artery)

DIAS PCCA (Diastolic Proximal Common Carotid Artery)

SYS DICA (Systolic Distal Internal Carotid Artery)

DIAS DICA (Systolic Distal Internal Carotid Artery)

SYS MICA (Systolic Mid Internal Carotid Artery)

DIAS MICA (Diastolic Mid Internal Carotid Artery)

SYS PICA (Systolic Proximal Internal Carotid Artery)

DIAS PICA (Diastolic Proximal Internal Carotid Artery)

SYS DECA (Systolic Distal External Carotid Artery)

DIAS DECA (Diastolic Distal External Carotid Artery)

SYS PECA (Systolic Proximal External Carotid Artery)

DIAS PECA (Diastolic Proximal External Carotid Artery)

**VERT (Systolic Vertebral Velocity)** 

SUBCLAV (Systolic Subclavian Velocity)

**Automatic IMT** 

**Summary Reports** 

#### **Urological Calculations**

Bladder Volume

Prostate Volume

Lt/Rt Renal Volume

Generic Volume

Post-Void Bladder Volume

# Cardiac Measurements/Calculations Calculations B-Mode Measurements

#### Aorta

Aortic Root Diameter (Ao Root Diam)

Aortic Arch Diameter (Ao Arch Diam)

Ascending Aortic Diameter (Ao Asc)

Descending Aortic Diameter (Ao Desc Diam)

Aorta Isthmus (Ao Isthmus)

Aorta (Ao st junct)

#### Aortic Valve

Aortic Valve Cusp Separation (AV Cusp)

Aortic Valve Area Planimetry (AVA Planimetry)

(Trans AVA)

#### Left Atrium

Left Atrium Diameter (LA Diam)

LA Length (LA Major)

LA Width (LA Minor)

Left Atrium Diameter to AoRoot Diameter Ratio (LA/Ao Ratio)

Left Atrium Area (LAA(d), LAA(s))

Left Atrium Volume, Single Plane, Method of Disk (LAEDV A2C, LAESV A2C) (LAEDV A4C, LAESV A4C)

#### Left Ventricle

Left Ventricle Mass (LVPWd, LVPWs)

Left Ventricle Volume, Teichholz/Cubic (LVIDd, LVI Ds)

Left Ventricle Internal Diameter (LVIDd, LVI Ds)

Left Ventricle Length (LVLd, LVLs)

Left Ventricle Outflow Tract Diameter (LVOT Diam)

Left Ventricle Posterior Wall Thickness (LVPWd, LVPWs)

Left Ventricle Length (LV Major)

Left Ventricle Width (LV Minor)

Left Ventricle Outflow Tract Area (LVOT)

Left Ventricle Area, Two Chamber/Four Chamber/Short Axis (LVA (d), LVA (s))

Left Ventricle Endocardial Area, Width (LVA (d), LVA(s))

Left Ventricle Epicardial Area, Length (LVAepi (d), LVAepi (s))

Left Ventricle Mass Index (LVPWd, LVPWs)

Ejection Fraction, Teichholz/Cube (LVIDd, LVIDs)

Left Ventricle Posterior Wall Fractional Shortening (LVPWd, LVPWs)

Left Ventricle Stroke Index, Teichholz/Cube (LVIDd, LVIDs and Body Surface Area)

Left Ventricle Fractional Shortening (LVIDd, LVIDs)

Left Ventricle Stroke Volume, Teichholz/Cubic (LVIDd, LVIDs)

Left Ventricle Stroke Index, Single Plane, Two Chamber, Method of Disk (LVI Dd, LVIDs, LVSd, LVSs)

Left Ventricle Stroke Index, Single Plane, Four Chamber, Method of Disk (LVI Dd, LVIDs, LVSd, LVSs)

Left Ventricle Stroke Index, Bi-Plane, Bullet, Method of Disk (LVAd, LVAs)

Interventricular Septum (IVS)

Left Ventricle Internal Diameter (LVI D)

Left Ventricle Posterior Wall Thickness (LVPW)

#### Mitral Valve

Mitral Valve Annulus Diameter (MV Ann Diam)

E-Point-to-Septum Separation (EPSS)

Mitral Valve Area Planimetry (MVA Planimetry)

#### Pulmonic Valve

Pulmonic Valve Area (PV Planimetry)

Pulmonic Valve Annulus Diameter (PV Annulus Diam)

Pulmonic Diameter (Pulmonic Diam)

#### Right Atrium

Right Atrium Diameter, Length (RAD Ma)

Right Atrium Diameter, Width (RAD Mi)

Right Atrium Area (RAA)

Right Atrium Volume, Single Plane, Method of Disk (RAAd)

Right Atrium Volume, Systolic, Single Plane,

Method of Disk (RAAs)

#### Right Ventricle

Right Ventricle Outflow Tract Area (RVOT Planimetry)

Left Pulmonary Artery Area (LPA Area)

Right Pulmonary Artery Area (RPA Area)

Right Ventricle Internal Diameter (RVIDd, RVIDs)

Right Ventricle Diameter, Length (RVD Ma)

Right Ventricle Diameter, Width (RVD Mi)

Right Ventricle Wall Thickness (RVAWd, RVAWs)

Right Ventricle Outflow Tract Diameter (RVOT Diam)

Left Pulmonary Artery (LPA)

Main Pulmonary Artery (MPA)

Right Pulmonary Artery (RPA)

#### System Inferior Vena Cava

Systemic Vein Diameter (Systemic Diam)

Patent Ductus Arterosis Diameter (PDA Diam)

Pericard Effusion (PEs)

Patent Foramen Ovale Diameter (PFO Diam)

Ventricular Septal Defect Diameter (VSD Diam)

Interventricular Septum (IVS) Fractional Shortening (IVSd, IVSs)

#### Tricuspid Valve

Tricuspid Valve Area (TV Panimetry)

Tricuspid Valve Annulus Diameter (TV Annulus Diam)

#### M-Mode Measurements

#### Aorta

Aortic Root Diameter (Ao Root Diam)

Aortic Valve

Aortic Valve Diameter (AV Diam)

Aortic Valve Cusp Separation (AV Cusp)

Aortic Valve Ejection Time (LVET)

#### Left Atrium

Left Atrium Diameter to AoRoot Diameter Ratio (LA/Ao Ratio) Left Atrium Diameter (LA Diam)

#### Left Ventricle

Left Ventricle Volume, Teichholz/Cubic (LVIDd, LVI Ds)

Left Ventricle Internal Diameter (LVIDd, LVI Ds)

Left Ventricle Posterior Wall Thickness (LVPWd, LVPWs)

Left Ventricle Ejection Time (LVET)

Left Ventricle Pre-Ejection Period (LVPEP)

Interventricular Septum (IVS)

Left Ventricle Internal Diameter (LVI D)

Left Ventricle Posterior Wall Thickness (LVPW)

#### Mitral Valve

E-Point-to-Septum Separation (EPSS)

Mitral Valve Leaflet Separation (D-E Excursion)

Mitral Valve Anterior Leaflet Excursion (D-E Excursion)

Mitral Valve D-E Slope (D-E Slope)

Mitral Valve E-F Slope (E-F Slope)

#### Pulmonic Valve

QRS complex to end of envelope (Q-to-PV close)

#### Right Ventricle

Right Ventricle Internal Diameter (RVIDd, RVIDs)

Right Ventricle Wall Thickness (RVAWd, RVAWs)

Right Ventricle Outflow Tract Diameter (RVOT Diam)

Right Ventricle Ejection Time (RVET)

Right Ventricle Pre-Ejection Period (RVPEP)

#### System

Pericard Effusion (PE (d))

#### Tricuspid Valve

QRS Complex to End of Envelope (Q-to-TV close)

# Doppler Mode Measurements

#### Aortic Valve

Aortic Insufficiency Mean Pressure Gradient (AR Trace)

Aortic Insufficiency Peak Pressure Gradient (AR Vmax)

Aortic Insufficiency End Diastole Pressure Gradient (AR Trace)

Aortic Insufficiency Mean Velocity (AR Trace)

Aortic Insufficiency Velocity Time Integral (AR Trace)

Aortic Valve Mean Velocity (AV Trace)

Aortic Valve Velocity Time Integral (AV Trace)

#### Aortic Valve Continued...

Aortic Valve Mean Pressure Gradient (AV Trace)

Aortic Valve Peak Pressure Gradient (AR Vmax)

Aortic Insufficiency Peak Velocity (AR Vmax)

Aortic Insufficiency End-Diastolic Velocity(AR Trace)

Aortic Valve Peak Velocity (AV Vmax)

Aortic Valve Peak Velocity at Point E (AV Vmax)

Aorta Proximal Coarctation (Coarc Pre-Duct)

Aorta Distal Coarctation (Coarc Post-Duct)

Aortic Valve Insufficiency Pressure Half Time (AR PHT)

Aortic Valve Flow Acceleration (AV Trace)

Aortic Valve Pressure Half Time (AV Trace)

Aortic Valve Acceleration Time (AV Acc Time)

Aortic Valve Deceleration Time (AV Dec Time)

Aortic Valve Ejection Time (AVET)

Aortic Valve Acceleration to Ejection Time Ratio (AV Acc Time, AVET)

Aortic Valve Area(VTI): AVA (Vmax)

Left Ventricle Outflow Tract Peak Pressure Gradient (LVOT Vmax)

Left Ventricle Outflow Tract Peak Velocity (LVOT Vmax)

Left Ventricle Outflow Tract Mean Pressure Gradient (LVOT Trace)

Left Ventricle Outflow Tract Mean Velocity (LVOT Trace)

Left Ventricle Outflow Tract Velocity Time Integral (LVOT Trace)

Left Ventricle Ejection Time (LVET)

#### Mitral Valve

Mitral Valve Regurgitant Flow Acceleration (MR Trace)

Mitral Valve Regurgitant Mean Velocity (MR Trace)

Mitral Regurgitant Mean Pressure Gradient (MR Trace)

Mitral Regurgitant Velocity Time Integral (MR Trace)

Mitral Valve Mean Velocity (MV Trace)

Mitral Valve Velocity Time Integral (MV Trace)

Mitral Valve Mean Pressure Gradient (MV Trace)

Mitral Regurgitant Peak Pressure Gradient (MR Vmax)

Mitral Valve Peak Pressure Gradient (MV Vmax)

Mitral Regurgitant Peak Velocity (MR Vmax)

Mitral Valve Peak Velocity (MV Vmax)

Mitral Valve Velocity Peak A (MV A Velocity)

Mitral Valve Velocity Peak E (MV E Velocity)

Mitral Valve Area according to PHT (MV PHT)

Mitral Valve Flow Deceleration (MV DecT)

Mitral Valve Pressure Half Time (MV PHT)

Mitral Valve Flow Acceleration (MV AccT)

Mitral Valve E-Peak to A-Peak Ratio (A-C and D-E) (MV E/ARatio)

#### Mitral Valve Continued...

Mitral Valve Acceleration Time

(MV Acc Time)

Mitral Valve Deceleration Time (MV Dec Time)

Mitral Valve Ejection Time ((MVET)

Mitral Valve A-Wave Duration (MV A Dur)

Mitral Valve Time to Peak (MV TTP)

Mitral Valve Acceleration Time/Deceleration Time Ratio (MVAcc/Dec Time)

Stroke Volume Index by Mitral Flow (MVA Planimetry, MVTrace)

#### Pulmonic Valve

Pulmonic Insufficiency Peak Pressure Gradient (PR Vmax)

Pulmonic Insufficiency End-Diastolic Pressure Gradient (PRTrace)

Pulmonic Valve Peak Pressure Gradient (PV Vmax)

Pulmonic Insufficiency Peak Velocity (PR Vmax)

Pulmonic Insufficiency End-Diastolic Velocity (Prend Vmax)

Pulmonic Valve Peak Velocity (PV Vmax)

Pulmonary Artery Diastolic Pressure (PV Trace)

Pulmonic Insufficiency Mean Pressure Gradient (PR Trace)

Pulmonic Valve Mean Pressure Gradient (PV Trace)

Pulmonic Insufficiency Mean Square Root Velocity (PR Trace)

Pulmonic Insufficiency Velocity Time Integral (PR Trace)

Pulmonic Valve Mean Velocity (PV Trace)

Pulmonic Valve Velocity Time Integral (PV Trace)

Pulmonic Insufficiency Pressure Half Time (PR PHT)

Pulmonic Valve Flow Acceleration (PV Acc Time)

Pulmonic Valve Acceleration Time (PV Acc Time)

Pulmonic Valve Ejection Time (PVET)

QRS complex to end of envelope (Q-to-PV close)

Pulmonic Valve Acceleration to Ejection TIme Ratio (PV Acc Time, PVET)

#### Right Ventricle

Right Ventricle Outflow Tract Peak Pressure Gradient (RVOT Vmax)

Right Ventricle Outflow Tract Peak Velocity (RVOT Vmax)

Right Ventricle Outflow Tract Velocity Time Integral (RVOT Trace)

Right Ventricle Ejection Time (RV Trace)

Stroke Volume by Pulmonic Flow (RVOT Planimetry, RVOT Trace)

Right Ventricle Stroke Volume Index by Pulmonic Flow (RVOT Planimetry, RVOT Trace)

#### System

Pulmonary Artery Peak Velocity (PV Vmax)

Pulmonary Vein Velocity Peak A (reverse) (P Vein A)

Pulmonary Vein Peak Velocity (P Vein D, P Vein S)

Systemic Vein Peak Velocity (PDA Diastolic, PDA Systolic)

Ventricular Septal Defect Peak Velocity (VSD Vmax)

Atrial Septal Defect (ASD Diastolic, ASD Systolic)

Pulmonary Vein A-Wave Duration (P Vein A Dur)

IsoVolumetric Relaxation Time (IVRT)

IsoVolumetric Contraction Time (IVCT)

Pulmonary Vein S/D Ratio (P Vein D, P Vein S)

Ventricular Septal Defect Peak Pressure Gradient (VSD Vmax)

Pulmonic-to-Systemic Flow Ratio (Qp/Qs)

#### Tricuspid Valve

Tricuspid Regurgitant Peak Pressure Gradient (TR Vmax)

Tricuspid Valve Peak Pressure Gradient (TV Vmax)

Tricuspid Regurgitant Peak Velocity (TR Vmax)

Tricuspid Valve Peak Velocity (TV Vmax)

Tricuspid Valve Velocity Peak A (TV A Velocity)

Tricuspid Valve Velocity Peak E (TV E Velocity)

Tricuspid Regurgitant Mean Pressure Gradient (TR Trace)

Tricuspid Valve Mean Pressure Gradient (TV Trace)

Tricuspid Regurgitant Mean Velocity (TR Trace)

Tricuspid Regurgitant Velocity Time Integral (TR Trace)

Tricuspid Valve Mean Velocity (TV Trace)

Tricuspid Valve Velocity Time Integral (TV Trace)

Tricuspid Valve Time to Peak (TV TTP)

Tricuspid Valve Ejection Time (TV Acc/Dec Time)

Tricuspid Valve A-Wave Duration (TV A Dur)

QRS complex to end of envelope (Q-to-TV close)

Tricuspid Valve Pressure Half Time (TV PHT)

Stroke Volume by Tricuspid Flow (TV Planimetry, TV Trace)

Tricuspid Valve E-Peak to A-Peak Ratio (TV E/A Velocity)

### Color Flow Mode Measurements

#### Aortic Valve

Proximal Isovelocity Surface Area: Regurgitant Orifice Area (AR Radius)

Proximal Isovelocity Surface Area: Radius of Aliased Point (AR Radius)

Proximal Isovelocity Surface Area: Regurgitant Flow (AR Trace)

Proximal Isovelocity Surface Area: Regurgitant Volume Flow (AR Trace)

Proximal Isovelocity Surface Area: Aliased Velocity (AR Vmax)

#### Mitral Valve

Proximal Isovelocity Surface Area: Regurgitant Orifice Area (MR Radius)

Proximal Isovelocity Surface Area: Radius of Aliased Point (MR Radius)

Proximal Isovelocity Surface Area: Regurgitant Flow (MR Trace)

Proximal Isovelocity Surface Area: Regurgitant Volume Flow (MR Trace)

Proximal Isovelocity Surface Area: Aliased Velocity (MR Vmax)

#### Combination Mode Measurements

#### Aortic Valve

Aortic Valve Area (Ao Root Diam, LVOT Vmax, AV Vmax)

Aortic Valve Area by Continuity Equation by Peak Velocity (Ao Root Diam, LVOT Vmax, AV Vmax)

Stroke Volume by Aortic Flow (AVA Pl ani met ry, AV Trace)

Cardiac Output by Aortic Flow (AVA Planimetry, AV Trace, HR)

Aortic Valve Area by Continuity Equation VTI (Ao Root Diam, LVOT Vmax, AV Trace)

#### Left Ventricle

Cardiac Output, Teichholz/Cubic (LVIDd, LVI Ds, HR)

Cardiac Output Two Chamber, Single Plane, Area-Length/ Method of Disk (Simpson) (LVAd, LVAs, HR)

Cardiac Output Four Chamber, Single Plane, Area-Length/ Method of Disk (Simpson) (LVAd, LVAs, HR)

Ejection Fraction Two Chamber, Single Plane, Area-Length/ Method of Disk (Simpson) (LVAd, LVAs)

Ejection Fraction Four Chamber, Single Plane, Area-Length/ Method of Disk (Simpson) (LVAd, LVAs)

Left Ventricle Stroke Volume, Single Plane, Two Chamber/ Four Chamber, Area-Length (LVAd, LVAs)

Left Ventricle Stroke Volume, Single Plane, Two Chamber/ Four Chamber, Method of Disk (Simpson) (LVIDd, LVIDs, LVAd, LVAs)

Left Ventricle Volume, Two Chamber/Four Chamber, Area-Length (LVAd, LVAs)

Ejection Fraction, Bi-Plane, Method of Disk (LVAd, LVAs, 2CH, 4CH)

Left Ventricle Stroke Volume, Bi-Plane, Method of Disk (LVAd, LVAs, 2CH, 4CH)

Left Ventricle Volume, Bi-Plane, Method of Disk (LVAd, LVAs, 2CH, 4CH)

Left Ventricle Stroke Index, Single Plane, Two Chamber/ Four Chamber, Area-Length (LVSd, LVSs and BSA)

Left Ventricle Volume, Single Plane, Two Chamber/Four Chamber, Method of Disk (LVAd, LVAs)

Left Ventricle Volume, Apical View, Long Axis, Method of Disk (LVAd, LVAs)

#### Mitral Valve

Stroke Volume by Mitral Flow (MVA Planimetry, MV Trace)

Cardiac Output by Mitral Flow (MVA Planimetry, MV Trace, HR)

#### Pulmonic Valve

Stroke Volume by Pulmonic Flow (PV Planimetry, PV Trace) Cardiac Output by Pulmonic Flow (PV Planimetry, PV Trace, HR)

#### Tricuspid Valve

Cardiac Output by Tricuspid Flow (TV Planimetry, TV Trace, HR)

#### Cardiac Worksheet

Parameter: Lists the Mode, The Measurement Folder and The Specific Measurement

Measured Value: Up to 100 Measurement Values for Each Item. Average, Maximum, Minimum, or Last

#### Generic Study in Cardiology

Stroke Volume (SV) Cardiac Output (CO)

#### **Probes**

4C-RS

Convex Probe

Applications: Abdomen, OB/GYN, Vascular, Urology

Number of Element: 128 Convex Radius: 60 mmR

FOV: 55°

Footprint: 66.2 x 18.3 mm

B-Mode Imaging Frequency 2.0, 3.0, 4.0, 5.0 MHz

Harmonic Imaging Frequency: 3.0, 4.0, 5.0 MHz

CFM/PDI/PWD Frequency: 2.0, 2.8, 3.6 MHz

Biopsy Guide: Multi Angle, Reusable Bracket

#### L6-12-RS

Linear Probe

Applications Vascular, Small Parts, Pediatrics

Number of Element: 128

Footprint:  $38.4 \times 6.0 \text{ mm}$ 

B-Mode Imaging Frequency: 6.0, 8.0, 10.0, 11.0 MHz

Harmonic Imaging Frequency: 8.0, 10.0, 12.0, 13.0 MHz

CFM/PDI/PWD Frequency: 4.0, 5.0, 6.0 MHz

Steered Angle: +/-20°

Biopsy Guide: Multi Angle, Reusable Bracket

#### 12L-RS

Linear Probe

Frequency Range: 4.2-13.0 MHz

Applications: Vascular, Small Parts, Pediatrics, MSK

Number of Element: 192 Footprint: 12.7 x 47.1mm

B-Mode Imaging Frequency: 6.0, 8.0, 10.0, 12.0 MHz Harmonic Imaging Frequency: 8.0, 10.0, 12.0, 13.0 MHz

Highest Linear Harmonics: 13MHz

CFM/PDI/PWD Frequency: 4.2 6.3 7.7 MHz

Steering Steps: 23 Steps, in Fine Angle Steer (from -20 to +20, 1 or 2 degree Steps) Max Steering Angle: +- 20 degrees in

Fine Angle Steer

Biopsy Guide: Multi Angle, Reusable Bracket

#### E8C-RS

Endo Micro Convex Probe

Applications: OB/GYN, Urology, Transvaginal, Transrectal

Number of Element: 128 Convex Radius: 10.73 mmR

FOV: 128°

Footprint: 16.9 x 21.2 mm

B-Mode Imaging Frequency: 6.0, 8.0, 10.0 MHz

Harmonic Imaging Frequency: 7.0, 8.0, 10.0 MHz

CFM/PDI/PWD Frequency: 4.2, 5.0, 6.3 MHz

Biopsy Guide: Fixed Angle, Disposable, or Reusable Bracket

#### E8Cs-RS

Applications: OB/GYN, Urology, Transvaginal, Transrectal

Number of Element: 128 Convex Radius: 8.73 mm

FOV: 168°

Footprint: 21.1 X 10.55 mm

B-Mode Imaging Frequency: 6.0,8.0,10.0 MHz Harmonic Imaging Frequency: 7.0,8.0,10.0 MHz

CFM/PDI/PWD Frequency: 4.0,5.0,6.0 MHz

Biopsy Guide: Fixed Angle, Disposable, or Reusable

Bracket

#### 8C-RS

Micro Convex Probe

Applications: Pediatrics Number of Element: 128 Convex Radius: 10.73 mmR

FOV: 131°

Footprint: 22.0 x 12.0mm

B-Mode Imaging Frequency: 6.0, 8.0, 10.0 MHz

Harmonic Imaging Frequency: 7.0, 8.0, 10.0 MHz

CFM/PDI/PWD Frequency: 4.2, 5.0, 6.3 MHz

Biopsy Guide: Not Available

#### 3Sc-RS

Phased Array Sector Probe

Applications: Cardiac, Transcranial

Number of Element: 64

FOV: 120°

Footprint:  $27.6 \times 19.3 \text{ mm}$ 

B-Mode Imaging Frequency: 2.0, 3.0, 4.0 MHz

Harmonic Imaging Frequency: 3.0, 3.2, 3.5, 4.0 MHz

CFM/PDI/PWD Frequency: 1.7, 2.0, 2.5, 3.3 MHz

CWD Frequency: 1.9 MHz

Biopsy Guide: Multi Angle, Reusable Bracket

#### 6S-RS

Applications: Cardiac, Transcranial

Number of Element: 64

FOV: 120°

Footprint: 23.5 X 16.8 mm

B-Mode Imaging Frequency: 4.0,5.0,6.0 MHz

Harmonic Imaging Frequency: 4.0,5.0,6.0, 7.0 MHz

CFM/PDI/PWD Frequency: 3.0,4.0,4.5 MHz

Biopsy Guide: Not available

#### Inputs and Outputs

HDMI

CVBS output (BNC)

S-Video output

VGA output (SXGA resolution)

Audio stereo output

100BASE-TX Ethernet (RJ45)

USB (3 on rear, 1 on side of the keyboard)

#### Safety Conformance

The LOGIQ V5 Expert is CE Marked to Council Directive 93/42/EEC on Medical Devices

Conforms to the following Standards for Safety:

- IEC 60601-1 Medical Electrical Equipment—Part 1: General Requirements for Safety
- IEC 60601-1-2 Medial Electrical Equipment—Part 1-2 General Requirements for Safety—Collateral Standard: Electromagnetic Compatibility—Requirements and Tests EMC Emissions Group 1 Class A Device Requirements as per CISPR 11
- IEC 60601-2-37 Medical Electrical Equipment—Part 2-37: Particular Requirements for the Safety of Ultrasonic Medical Diagnostic and Monitoring Equipment
- ISO 10993-1 Biological Evaluation of Medical Devices—Part 1 Evaluation and Testing
- EN 62366 Medical Devices—Application of Usability Engineering to Medical Devices



#### **About GE Healthcare**

GE Healthcare provides transformational medical technologies and services to meet the demand for increased access, enhanced quality and more affordable healthcare around the world. GE (NYSE: GE) works on things that matter - great people and technologies taking on tough challenges. From medical imaging, software & IT, patient monitoring and diagnostics to drug discovery, biopharmaceutical manufacturing technologies and performance improvement solutions, GE Healthcare helps medical professionals deliver great healthcare to their patients.

# Imagination at work

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