LOGIQ E9

Data sheet

Product description

The LOGIQ™ E9 is GE's leadership ultrasound imaging system designed for abdominal, vascular, obstetric, gynecologic, neonatal, pediatric, urological, transcranial, cardiac and small parts applications.

System architecture

Agile Acoustic Architecture – GE's innovative, patented, model-based technology provides vast computational power, ease of imaging, workflow flexibility and product upgradeability. The LOGIQ E9 excels in the following areas:

Exceptional Image Quality is created through the use of SRI-HD, coded techniques and advanced E-Series transducers.

Raw Data is GE's innovative technology that allows a virtual rescan on archived images by applying many of the same scan controls available during the original exam.

Productivity features help enable LOGIQ E9 users to enhance their scan productivity – including Scan Assistant and Automatic Optimization.

Ergonomics with power-assisted control panel, articulating LCD arm and lightweight transducers combine to make one of the most ergonomic ultrasound systems available.

General specifications

Dimensions and weight
(Dimensions given with floating keyboard stowed for transport)

Height	1300 mm, 51 in
Width	584 mm, 23 in
Depth	830 mm, 32.8 in
Weight	135 kg, 297 lbs

Electrical power
- Voltage: 100-240 Vac
- Frequency: 50/60 Hz
- Power Consumption maximum of 1.2 KVA with peripherals

Console design
- 4 Active Probe Ports
- Integrated HDD (500 GB)
- Integrated DVD-R Multi Drive
- On-board storage of thermal printer
- Integrated speakers with sub-woofer for premium sound
- Integrated locking mechanism that provides rolling lock and caster swivel lock
- Integrated cable management
- Front and rear handles
- Easily removable air filters

User interface

Operator keyboard
- Floating keyboard adjustable in three dimensions:
  - Height
  - Rotation
  - Extension
- Full-sized, backlit alphanumeric keyboard
- Ergonomic hard key layout
- Interactive back-lighting
- Integrated recording keys for remote control of up to 4 peripheral or DICOM® devices
- Integrated gel warmer (option)

Touch screen
- 10.4 in High Resolution, Color, Touch, LCD screen
- Interactive dynamic software menu
- Brightness adjustment
- User-configurable layout

LCD monitor
- 19 in High-Resolution LCD
- LCD translation (independent of console):
  - 350 mm, 13.7 in horizontal
  - 150 mm, 5.9 in vertical
  - 145° swivel
- Fold-down and lock mechanism for transportation
- Brightness & contrast adjustment
- Resolution: 1280 x 1024
- Horizontal/Vertical viewing angle of ±170°

System overview

Applications
- Abdominal
- Obstetrical
- Gynecological
- Breast
- Small parts
- Vascular /Peripheral
- Transcranial
- Pediatric and Neonatal
- Musculoskeletal
- Urological
- Cardiac

Operating modes
- B-Mode
- M-Mode
- Color Flow Mode (CFM)
- B-Flow™/B-Flow Color (option)
- Extended Field of View (LOGIQ View, option)
- Power Doppler Imaging (PDI)
- PW Doppler
- Volume Modes (3D/4D):
  - 3D Static (option)
  - 4D Real Time (option)
- Anatomical M-Mode
- Coded Contrast Imaging (option)
- Elastography (option)

Scanning methods
- Electronic Sector
- Electronic Convex
- Electronic Linear
- Mechanical Volume Sweep

Transducer types
- Sector Phased Array
- Convex Array
- Micro convex Array
- Linear Array
- Matrix Array
- Volume Probes (4D)
  - Convex Array
  - Micro convex Array
  - Linear Array
- Spilt crystal

System Standard features
- Advanced user interface with high resolution 10.4 inch LCD touch panel
- Automatic Optimization
- CrossXBeam™
- Speckle Reduction Imaging (SRI-HD)
- Fine Angle Steer
- Coded Harmonic Imaging
- Virtual Convex
- Patient information database
- Image Archive on integrated CD/DVD and hard drive
- Advanced 3D
- Raw Data Analysis
- Real-time automatic Doppler calcs
- OB Calcs
- Fetal Trending
- Multigestational Calcs
- Hip Dysplasia Calcs
- Gynecological Calcs
- Vascular Calcs
- Urological Calcs
- Renal Calcs
- Cardiac Calcs
- InSite™ ExC capability
- On-board electronic documentation

Peripheral options
- Integrated, onboard options for:
  - Digital B&W thermal printer
  - Digital video recorder
- Integrated options for:
  - Digital color thermal printer
  - Digital A6 color thermal printer
- External USB printer connection
- DVI-I output available for compatible devices
- S-Video output
- Foot Switch, with programmable functionality
- Console Protective Cover

Display modes
- Live and Stored Display Format: Full size and split screen – both w/ thumbnails. For still and CINE
- Review Image Format: 4x4, and "thumbnails". For Still and CINE.
- Simultaneous Capability
  - B or CrossXBeam /PW or CW
  - 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

Display modes *(cont.)*

- Multi-image (split/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

Display annotation

- Patient Name: First, Last, & Middle
- Patient ID
- Alternate Patient ID
- Age, Sex and Birth Date
- Hospital Name
- Date format: 3 types selectable MM/DD/YY, DD/MM/YY, YY/MM/DD
- Time format: 2 types selectable 24 hours, 12 hours
- Gestational Age from LMP/EDD/GA/BBT
- 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
  - Frame Averaging
  - Gray Map
  - SRI-HD
- M-Mode
  - Gain
  - Dynamic Range
  - Time Scale
- Doppler Mode
  - Gain
  - Angle
  - Sample Volume Depth and Width
  - Wall Filter
  - Velocity and/or Frequency Scale
  - Spectrum Inversion
  - Time Scale
  - PRF
  - Doppler Frequency
- Color Flow Doppler Mode
  - Line Density
  - Frame Averaging
  - Packet Size
  - Color Scale: 3 types: Power, Directional PDI, and Symmetrical Velocity Imaging
  - Color Velocity Range and Baseline
  - Color Threshold Marker
  - Color Gain
  - PDI
  - Spectrum Inversion
  - Doppler Frequency
- TGC Curve
- Acoustic Frame Rate
- CINE Gage, Image Number/Frame Number
- Body Pattern: Multiple human and animal types
- Application Name
- Measurement Results
- Operator Message
- Displayed Acoustic Output
  - TIS: Thermal Index Soft Tissue
  - TIC: Thermal Index Cranial (Bone)
  - TIB: Thermal Index Bone
  - MI: Mechanical Index
- % of Maximum Power output
- Biopsy Guide Line and Zone
- Heart Rate

General system parameters

System setup

- Pre-programmable Categories
- User Programmable Preset Capability
- Factory Default Preset Data
- Languages: English, French, German, Spanish, Italian, Portuguese, Russian, Greek, Swedish, Danish, Dutch, Finnish, Norwegian
- OB Report Formats including Tokyo Univ., Osaka Univ., USA, Europe, and ASUM
- User Defined Annotations
- Body Patterns
- Customized Comment Home Position

Complete User Manual available on board through Help (F1)

User Manual and Service Manual are included on CD with each system. A printed manual is available upon request.

CINE Memory/Image Memory

- 776 MB of CINE Memory
- Selectable CINE Sequence for CINE Review
- Prospective CINE Mark
- Measurements/Calculations & 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

Image storage

- On-board database of patient information from past exams
- Storage Formats:
  - DICOM – compressed/uncompressed, single/multiframe, with/without Raw Data
  - Export JPEG, WMV (MPEG 4), and AVI formats
- Storage Devices:
  - USB Memory Stick: up to 137 GB (for exporting individual images/clips)
  - CD-RW storage: 700 MB
  - DVD storage: -R (4.7 GB)
  - Hard Drive Image Storage: ~335 GB
- Compare previous exam images with current exam
- Reload of archived data sets

Connectivity

- Ethernet network connection
- Wireless LAN (option)
- DICOM 3.0 (optional)
  - Verify
  - Print
  - Store
  - Modality Worklist
  - Storage Commitment
  - Modality Performed Procedure Step (MPPS)
  - Media Exchange
  - Multi-Modality Media Import
  - Off network/mobile storage queue
  - Query/Retrieve, includes images and volume data sets from other modalities such as CT, MR and Mammography
- Public SR Template
- Structured Reporting – compatible with vascular and OB, Cardiac and Breast standard
- InSite ExC capability

Physiological Input Panel (Option)

- Physiological Input
  - ECG, 1 channel
  - PCG, 1 channel
  - AUX, 1 channel
  - Dual R-Trigger
  - Pre-settable ECG R Delay Time
  - Pre-settable ECG Position
  - Adjustable ECG Gain Control
  - Pre-settable PCG Position

Physiological Input Panel (Option) *(cont.)*
– Adjustable PCG Gain Control
– Pre-settable AUX Position
– Adjustable AUX Gain Control
• Automatic Heart Rate Display

Report Writer (Option)
• On-board reporting package automates report writing
• Formats various exam results into a report suitable for printing or reviewing on a standard PC
• Exam results include patient info, exam info, measurements, calculations, images, comments and diagnosis
• Standard templates provided
• Customizable templates

Scanning parameters
• Displayed Imaging Depth: 0–36 cm
• Minimum Depth of Field: 0–2 cm (Zoom) (probe dependent)
– Maximum Depth of Field: 0–36 cm (probe dependent)
• Continuous Dynamic Receive Focus/ Continuous Dynamic Receive Aperture
• Adjustable Dynamic Range
– Adjustable Field of View (FOV)
• Image Reverse: Right/Left
• Image Rotation of 0°, 180°

Digital B-Mode
• Adjustable:
– Acoustic Power
– Gain
– Dynamic Range
– Frame Averaging
– Gray Scale Map
– Frequency
– Speed of Sound (application dependent)
– Line Density
– Scanning Size (FOV or Angle – depending on the probe, see probe specifications)
– CrossXBeam
– B Colorization
– Reject
– Suppression
– SRI-HD

Digital M-Mode
• Adjustable:
– Acoustic Power
– Gain
– Dynamic Range
– Gray Scale Map
– Frequency
– Sweep Speed
– M Colorization
– M Display Format
– Rejection

Anatomical M-Mode
• M-mode cursor adjustable at any plane
• Can be activated from a CINE loop from a live or stored image
• M & A capability
• Available with Color Flow Mode

Digital Spectral Doppler Mode
• Adjustable:
– Acoustic Power
– Gain
– Dynamic Range
– Gray Scale Map
– Transmit Frequency
– Wall Filter
– PW Colorization
– Velocity Scale Range
– Sweep Speed
– Sample Volume Length
– Angle Correction
– Steered Linear
– Spectrum Inversion
– Trace Method
– Baseline Shift
– Doppler Auto Trace
– Time Resolution
– Compression
– Trace Direction
– Trace Sensitivity

Digital 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
– Frame Average
– Threshold
– Accumulation mode
– Sample Volume Control
– Flash Suppression

Digital Power Doppler Imaging
• Adjustable:
– Acoustic Power
– Color Maps, including velocity-variance maps
– Gain
– Velocity Scale Range
– Wall Filter
– Packet Size
– Line Density
– Spatial Filter
– Steering Angle

– Frame Average
– Threshold
– Accumulation mode
– Sample Volume Control
– Flash Suppression

Continuous Wave Doppler (Option)
• Available on M5S-D, S4-10-D, 6S-D, 6Tc, P2D and P6D probes
• Steerable CW mode includes Adjustable:
– Acoustic Power
– Gain
– Dynamic Range
– 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 improve contrast resolution
• Selectable amount of contrast resolution improvement (low, medium, high)
• Auto-Spectral Optimize – adjusts base line, invert, PRF (on live image), and angle correction

Coded Harmonic Imaging
• Available on all 2D and 4D probes, except M4S

B-Flow (Option)
• Available on C1-6-D, C1-6VN-D, C2-9-D, C2-9-VN-D, 9L-D, ML6-15-D and L8-18i-D probes
• Background: On/Off
• Tissue: Low/High
• Sensitivity/PRI
• Acoustic Power
• Frequency
• Line Density
• Frame Average
• Gray Scale Map
• Tint Map
• Dynamic Range
• Rejection
• Gain
• Suppression
• SRI-HD
• B-Flow Color
• Accumulation

Coded Contrast Imaging (Option)†

- Available on 3CRF, S1-5D, C1-5-D, C1-6-D, C1-6VN-D, C2-9-D, C2-9VN-D, IC5-9-D, 9L-D, ML6-15-D, RAB2-5-D, RSP6-16-D, RIC5-9-D, M5S-D
- 2 Contrast Timers
- Timed Updates: 0.05–10 sec
- Accumulation mode, seven levels
- Maximum Enhance Mode
- Flash
- Time Intensity Curve (TIC) Analysis

The LOGIQ E9 is designed for compatibility with commercially available ultrasound contrast agents. Because the availability of these agents is subject to government regulation and approval, product features intended for use with these agents may not be commercially marketed nor made available before the contrast agent is cleared for use. Contrast related product features are enabled only on systems for delivery to an authorized country or region of use.

LOGIQView (Option)

- Extended Field of View Imaging
- Available on the following probes: 9L-D, 11L-D, ML6-15D, L8-18i-D, 3CRF, C1-5D, C1-6-D, C1-6VN-D, C2-9-D, C2-9VN-D, M6C-D, IC5-9D, RIC5-9D, RAB 2-5D, RAB4-8D, RAB6-D, RNA5-9D, RSP6-16D, M4S-D, M5S-D, S1-5D, S4-10D, 6S-D
- For use in B-Mode
- CrossXBeam is available on linear probes
- Auto detection of scan direction
- Pre or post-process zoom
- Rotation
- Auto best fit on monitor
- Measurements in B-Mode
- Up to 60 cm scan length

3D

- Allows unlimited rotation and planar translations
- 3D reconstruction from CINE sweep

Advanced 3D

- Acquisition of Color data
- Automatic rendering
- 3D Landscape technology
- 3D Movie

Real Time 4D (Option)

- Acquisition Modes:
  - Real Time 4D
  - Static 3D
- Visualization Modes:
  - 3D Rendering (diverse surface and intensity projection modes)
    - Sectional Planes (3 Section planes perpendicular to each other)
    - Volume Contrast Imaging-Static (option)
    - Tomographic Ultrasound Imaging (option)
- Render Mode:
  - Surface Texture, Surface Smooth, max-, min- and X-ray (average intensity projection), mix mode of two render modes
- Curved 3 point Render start
- 3D Movie
- Scalpel: 3D Cut tool
- Display Format:
  - Quad: A-/B-/C-Plane/3D
  - Dual: A-Plane/3D
  - Single: 3D or A- or B- or C-Plane
- Automated Volume Calculation – VOCAL II (option)
- Betaview

Volume Navigation (Option)

- Available on the C1-6D, C1-6VN-D, C2-9D, C2-9VN-D, C1-5D, , S1-5D, 9L-D, ML6-15D, 3CRF, IC5-9, S4-10D and L8-18i-D, M5S-D probes
- Sensor-based acquisition
- Position Markers
- Needle tip tracking
- Virtual tracking
- Auto image registration
- Tru3D feature includes:
- Display of data in: Main-, Parallel-, Angular-Mode
- Render Modes: Gray Surface, Texture, Min-, Max-, Average-Intensity
- Measurements: distance, angle, area, volume
- 3D Movie

Scan Assistant (Option)

- Factory Programs
- User-defined programs
- Steps include image annotations, mode transitions, basic imaging controls and measurement initiation

Compare Assistant (Option)

- Allows side-by-side comparison of previous ultrasound and other modality exams during live scanning

Breast Productivity Package (Option)

- Worksheet summary includes measurements and locations for lesions and lymph nodes
- Feature Assessment
- BI-RADS® Assessment
- User editable

Thyroid Productivity Package (Option)

- Worksheet summary includes measurements and locations for nodule, parathyroid and lymph node
- Feature Assessment
- User editable

Shearwave Elastography† (Option – not available in the United States)

- Available on C1-6-D, C1-6VN-D and 9L-D transducers
- User programmable measurement display in kPa or meters per sec
- Single and Dual view display

Strain Elastography (Option)

- Available on ML6-15-D, 9L-D, IC5-9-D, C2-9-D, C2-9VN-D, C1-6-D, C1-6VN-D, and C1-5-D probes

Strain Elastography Quantification† (Option – not available in the United States)

- Relative quantification tool
- Available on ML6-15-D, 9L-D, IC5-9-D, C1-5-D, C2-9-D, C2-9VN-D, C1-6-D and C1-6VN-D transducers

Quantitative Flow Analysis (Option)

- Available in Color and Power Doppler

TVI (Option)

- Myocardial Doppler Imaging with color overlay on tissue image
- Available on the sector probes
- Tissue color overlay can be removed to show just the 2D image, still retaining the tissue velocity information
- Curved Anatomical M-mode: free (curved) drawing of M-mode generated from the cursor independent from the axial plane
- Q-Analysis: Multiple Time – Motion trace display from selected points in the myocardium

Stress Echo (Option)

- Advanced and flexible stress echo examination capabilities
- Provides exercise and pharmacological protocol templates
- 6 default templates
- Template editor for user configuration of existing templates or creation of new templates
- Reference scan display during acquisition for stress level comparison (dual screen)
- Baseline level/Previous level selectable
- Raw data continuous capture
- Over 100 sec available
- Wall motion scoring (bulls-eye and segmental)

Stress Echo (Option) *(cont.)*

• Smart stress: Automatically set up various scanning parameters (e.g. geometry, frequency, gain) according to same projection on previous level

Virtual Convex

• Provides a convex field of view
• Compatible with CrossXBeam
• Available on all linear and sector transducers 9L-D, 11L-D, ML6-15-D, L8-18i-D, RSP6-16-D, M4S-D, M5S-D, S1-5-D, S4-10-D, 6S-D, 6Tc

CrossXBeam

• Provides 3,5,7, or 9 angles of spatial compounding
• Live Side by Side DualView Display
• Compatible with:
  – Color Mode
  – PW
  – SRI-HD
  – Coded Harmonic Imaging
  – Virtual Convex
• Available on the following probes: 9L-D, 11L-D, ML6-15D, L8-18i-D, 3CRF, C1-5D, C1-6-D, C1-6VN-D, C2-9-D, C2-9VN-D, M6C-D, IC5-9D, RIC5-9D, RAB 2-5D, RAB4-8D, RAB6-D, RNA5-9D, RSP6-16D

SRI-HD

• 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 w/ B-Mode, Color, Contrast Agent and 3D/4D imaging

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
  – Spectral Averaging

  – 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
  – CFM Line Resolution
  – 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
  – Color Gain (loops only)
  – Dynamic Range
• Anatomical M Mode
• Max Read Zoom to 8x
• Base Line Shift
• Sweep Speed
• PW Mode
  – Gray Map
  – Post Gain
  – Baseline shift
  – Sweep Speed
  – Invert Spectral wave form
  – Compression
  – Rejection
  – Colorized Spectrum
  – Display Format
  – Doppler Audio
  – Angle Correct
  – Quick Angle Correct
  – Auto Angle Correct
• Color Flow
  – 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
• 4D
  – Gray Map, Colorize
  – Post Gain
  – Change display – single, dual, quad sectional or rendered

Measurements/calculations

General B-Mode

• Depth & Distance
• Circumference (Ellipse/Trace)
• Area (Ellipse/Trace)
• Volume (Ellipsoid)
• % Stenosis (Area or Diameter)
• Angle between two lines
• Dual B-mode measurement

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)

OB measurements/calculations *(cont.)*

  – FTA (Fetal Trunk Cross-sectional Area)
  – HL (Humerus Length)
  – BD (Binocular Distance)
  – FT (Foot Length)
  – OFD (Occipital Frontal Diameter)
  – TAD (Transverse Abdominal Diameter)
  – TCD (Transverse Cerebellum Diameter)
  – THD (Thorax Transverse Diameter)
  – TIB (Tibia Length)
  – ULNA (Ulna Length)
• Estimated Fetal Weight (EFW) by:
  – AC, BPD
  – AC, BPD, FL
  – AC, BPD, FL, HC
  – AC, FL
  – AC, FL, HC
  – AC, HC
  – BPD, APTD, TTD, FL
  – BPD, APTD, TTD, SL
• Calculations and Ratios
  – FL/BPD
  – FL/AC
  – FL/HC
  – HC/AC
  – CI (Cephalic Index)
  – AFI (Amniotic Fluid Index)
  – CTAR(Cardio-Thoracic Area Ratio)
• Measurements Calculations by:
  ASUM, ASUM 2001, Berkowitz,
  Bertagnoli, Brenner, Campbell, CFEF,
  Chitty, Eik-Nes, Ericksen, 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 Calcs
• Expanded Worksheets

OB Measure Assistant (Option)

• Allows automatic measurement of
  BPD, HC, FL and AC
• User editable

Breast Measure Assistant (Option)

• Allows automatic detection and
  measurement of breast lesions in a
  user selected ROI
• User editable

GYN measurements/calculations

• Right Ovary Length, Width, Height
• Left Ovary Length, Width, Height
• Uterus Length, Width, Height
• Cervix Length, Trace
• Ovarian Volume
• ENDO (Endometrial thickness)
• Ovarian RI
• Uterine RI
• Follicular measurements
• Pelvic Floor measurements
• Summary Reports
• Qualitative Description
  (Anatomical survey)

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)
• Auto IMT
• Summary Reports

Urological calculations

• Bladder Volume
• Prostate Volume
• Lt/Rt Renal Volume
• Generic Volume
• Post-Void Bladder Volume

Probes (All Optional)

C1-6-D XDclear Convex Probe	
Applications	Abdomen, OB/GYN, Pediatrics, Peripheral Vascular
Biopsy Guide	Multi-Angle, disposable with a reusable bracket (H4913BB)

C1-6VN-D VNav Inside XDclear Convex Probe *VNav sensor inside transducer for Volume Navigation tracking without sensor cables*	
Applications	Abdomen, OB/GYN, Pediatrics, Peripheral Vascular
Biopsy Guide	Multi-Angle, disposable with a reusable bracket (H4913BB)

C1-5-D Convex Probe	
Applications	Abdomen, OB/GYN, Urology, Vascular
Biopsy Guide	Multi-Angle, disposable with a reusable bracket (H40432LE)

C2-9-D XDclear Convex Probe	
Applications	Abdomen, OB/GYN, Pediatrics, Peripheral Vascular
Biopsy Guide	Multi-Angle, disposable with a reusable bracket (H4913BA)

C2-9VN-D VNav Inside XDclear Convex Probe
VNav sensor inside transducer for Volume Navigation tracking without sensor cables

Applications	Abdomen, OB/GYN, Pediatrics, Peripheral Vascular
Biopsy Guide	Multi-Angle, disposable with a reusable bracket (H4913BA)

3CRF-D Micro Convex Biopsy Probe

Applications	Abdomen, OB/GYN, Vascular
Biopsy Guide	Single-Angle, disposable with a reusable bracket (H40442LR)

3CRF Micro-convex Biopsy Probe

Applications	Abdomen, OB/GYN
Biopsy Guide	Single-Angle, disposable with a reusable bracket (H40442LR)

M6C-D Matrix Array Convex Probe

Applications	Abdomen, OB/GYN, Pediatrics
Biopsy Guide	Multi-angle, disposable with a reusable bracket (E8385RF)

IC5-9-D Micro Convex Probe

Applications	OB/GYN, Urological
Biopsy Guide	Single Angle, Disposable with a disposable bracket (E8385MJ) or reusable bracket (H40412LN)

S1-5-D Sector Probe

Applications	Abdomen, OB/GYN
Biopsy Guide	Multi-angle, disposable with a reusable bracket (H4908SD)

S4-10-D Sector Probe

Applications	Pediatrics, Neonatal

M5S-D Sector Probe

Applications	Cardiac, TCD

6S-D Sector Probe

Applications	Pediatric Cardiac

9L-D Linear Probe

Applications	Vascular, Small Parts, Pediatric, Abdomen
Biopsy Guide	Multi-angle, disposable with a reusable bracket (H4906BK)

11L-D Linear Probe

Applications	Vascular, Small Parts, Neonatal, Pediatrics
Biopsy Guide	Multi- Angle, disposable with a reusable bracket (H40432LC)

ML6-15-D Matrix Array Linear Probe

Applications	Small Parts, Vascular, Neonatal, Pediatrics
Biopsy Guide	Multi-Angle, disposable with a reusable bracket (H40432LJ)

L8-18i-D Linear Probe

Applications	Small Parts, Vascular, Neonatal, Pediatrics, and Intraoperative

RAB2-5-D Convex Volume Probe

Applications	Abdomen, OB
Biopsy Guide	Single Angle, disposable with a reusable bracket (H46701AE), single angle, reusable (H48621Y)

RAB 6-D Convex Volume Probe

Applications	Abdomen, OB/GYN, Pediatrics

RIC5-9-D Convex Volume Probe

Applications	OB/GYN, Urology
Biopsy Guide	Single Angle, Reusable (H46721R)

RNA5-9-D Convex Volume Probe

Applications	Neonatal, Pediatrics
Biopsy Guide	Single Angle, disposable with a reusable bracket (H46701AF), single angle, reusable (H48651DG)

RSP6-16-D Linear Volume Probe

Applications	Small Parts, Peripheral Vascular, Pediatrics
Biopsy Guide	Single Angle, disposable with a reusable bracket (H46701AD), single angle, reusable (H46721W)

P2D CW Split Crystal Probe

Frequency	2.1 MHz

P6D CW Split Crystal Probe

Frequency	6.3 MHz

6Tc Transesophageal Sector Probe

Applications	Cardiac

External inputs and outputs
(not including on-board peripherals)

• DVI-I
• Audio Stereo Out
• Ethernet
• Multiple USB 2.0 ports

Safety conformance

The LOGIQ E9 is:

• Classified to UL 60601-1 by a Nationally Recognized Test Lab
• Certified to CAN/CSA-C22.2 No. 601.1-M90 by an SCC accredited Test Lab
• CE Marked to Council Directive 93/42/EEC on Medical Devices
• Conforms to the following standards for safety (including national deviations):
  – IEC 60601-1 Medical electrical equipment –Part 1: General requirements for safety
  – IEC 60601-1-2 Medical electrical equipment – Part 1-2 General require ments for safety – Collateral Standard: Safety requirements for medical electrical systems
  – IEC 62366 Medical Devices – Application of Usability Engineering to Medical Devices
  – 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
  – NEMA® UD2 Acoustic output measure ment standard for diagnostic ultrasound equipment
  – NEMA UD3 Standard for real time display of thermal and mechanical acoustic output indices on diagnostic ultrasound equipment (MI, TIS, TIB, TIC)
  – EMC Emissions Group 1 Class A device requirements as per Sub clause 4.2 of CISPR 11

Cardiac measurements/ 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 W idth (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 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 Ti me)
  - Aortic Valve Deceleration TIme (AV Trace)
  - Aortic Valve Ejection Time (AVET)
  - Aortic Valve Acceleration to Ejection Time Ratio (AV Acc Time, AVET)
  - Aortic Valve Area according to PHT

- Left Ventricle
  - Left Ventricle Outflow Tract Peak Pressure Gradient (VLOT Vmax)
  - Left Ventricle Outflow Tract Peak Velocity (LVOT Vmax)
  - Left Ventricle Outflow Tract Mean

Doppler Mode measurements *(cont.)*
  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 (MR Trace)
  - Mitral Valve Velocity Time Integral (MR Trace)
  - Mitral Valve Mean Pressure Gradient (MR Trace)
  - Mitral Regurgitant Peak Pressure Gradient (MR Vmax)
  - Mitral Valve Peak Pressure Gradient (MR Vmax)
  - Mitral Regurgitant Peak Velocity (MR Vmax)
  - Mitral Valve Peak Velocity (MR 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 Trace)
  - Mitral Valve Pressure Half Time (PV PHT)
  - Mitral Valve Flow Acceleration (MV Trace)
  - Mitral Valve E-Peak to A-Peak Ratio (A-C and D-E) (MV E/ARatio)
  - Mitral Valve Acceleration Time (MV Acc Time)
  - Mitral Valve Deceleration Time (MV Dec Time)
  - Mitral Valve Ejection Time (MV Trace)
  - Mitral Valve A-Wave Duration (MV A Dur)
  - Mitral Valve Time to Peak (MV Trace)
  - 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 (RVOTTrace)
  - Right Ventricle Ejection Time (RV Trace)
  - Stroke Volume by Pulmonic Flow (RVOT Planimetry, RVOTTrace)
  - 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 Acc/Dec Time)
  - 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)

Color Flow Mode measurements *(cont.)*
- 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 six measurement values for each item. Average, maximum, minimum, or last

Generic study in Cardiology
- Stroke Volume (SV)
- Cardiac Output (CO)

Please contact your GE Sales Representative for information about availability of product and specifications in your country or region of use.

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