GE HealthCare

Versana Premier™

Ultrasound System

Specification sheet
Rev. 3 USCAN

Versana Premier ultrasound is designed to help you apply your clinical and imaging skills to deliver high-quality care to the wide range of patients you see daily. This high-quality system is well suited for general practice clinics, physical check-up centers, community healthcare centers, scanning center, and other facilities worldwide that offer basic medical care. Its versatility covers a broad range of examinations: abdominal, OB/GYN, cardiac, small parts, urology, vascular, pediatrics, MSK, thoracic, etc.

Contents

General specifications

Dimensions and weight	
Height	Less than 1840 mm
Width	Less than 600 mm
Depth	Less than 970 mm
Weight	Less than 73 kg without any probes or peripherals

Electrical power
Voltage 100 – 240 VAC
Frequency 50/60 Hz
Power consumption maximum of 500 VA with peripherals
Boot up time <25 sec

Control design
4 active probe ports
Integrated SSD (512 GB)
Integrated speakers
Probe holders, removable for cleaning and washing
Gel holder, removable for cleaning and washing
Gel warmer, switchable left/right
Front and rear handles
Probe cable management slots and hooks
Easily removable air filters
Wheels: Locking mechanism that provides rolling lock and caster swivel lock
Paper tray
Accessory box
Flexible Cable hook (optional)
Drawer (optional)
Endo probe holder
Foot Rest Accessory Tray

User interface

Operator keyboard
Height adjustable
Push-Push A/N keyboard (optional)
15.6'' touch panel support multiple gesture recognition and user configured layout*

Monitor	
23.8" (604.5 mm) high-resolution: 1920 x 1080† LED backlit	
Fixed monitor arm††	
Tilt/Rotate	• Tilt angle: +45˚/-90˚ • Rotate angle: -90˚/+90˚
Fold-down and lock mechanism for transportation	
Brightness and contrast adjustment	

System overview

Applications
Abdominal
Obstetrical
Gynecological
Small parts (includes breast, testicles, thyroid)
Urology
Pediatric
Cardiac adult
Cardiac pediatric
Vascular/peripheral vascular
Musculoskeletal conventional
Musculoskeletal superficial
Thoracic/pleural
Transcranial
Transrectal
Transvaginal
Interventional guidance (includes tissue biopsy, fluid drainage, vascular and non-vascular access)

* 15.6 inch TP is only supported for Versana Premier VA.

† 23.8 inch LCD is only supported for Versana Premier VA.

†† Fixed monitor is default offering for Versana Premier VS; flexible arm is optional. Flexible arm is default offering for VA.

System overview *(cont.)*

Scanning methods
Electronic convex
Electronic linear
Electronic micro convex
Electronic sector
Mechanical volume sweep

Transducer types
Convex array
Linear array
Microconvex array
Sector phased array
Volume probes (4D)
Bi-plane array, two convex transducers
Bi-plane array, one linear and one convex transducers

Operating modes
B-Mode
Coded Phase Inversion Harmonic Imaging
M-Mode
Anatomical M-Mode
Color M-Mode
Color Flow Mode (CFM)
Power Doppler Imaging (PDI)
Directional PDI
B-Flow (option)
B-Flow Color (option)
PW Doppler with high PRF
CW Doppler mode (option)
TVI mode (option)
3D/4D volume modes (option)
Curve AMM

System standard features

Installation wizard
Whizz B-Mode
Whizz CF Mode
Auto Bladder
CrossXBeam™
SRI-HD (High Definition Speckle Reduction Imaging)
B-Steer
Hip dysplasia calculations
Virtual Convex
Patient information database
Image Archive on integrated SSD
Raw data analysis
Voice comments
Real-time automatic Doppler calculations
OB calculations
Fetal Growth Chart
SonoBiometry (BPD/HC/AC/HL/FL)
Digital lateral gain compensation
Multi-gestational calculations
Gynecological calculations
Vascular calculations
Breast productivity
Urological calculations (stepper volume calculation (prostate), joint use with stepper-grid system
Renal calculations
Cardiac calculations
On-board reporting package
Network storage
eDelivery
Remote capability: CSD
My Trainer
Scan Coach with Whizz Label function
Scan Assistant
Standby mode

System standard features *(cont.)*

Whizz Note
V-zoom
Whizz Report
Digital Keyboard
Digital time gain compensation
e-Delivery
Anatomical M-Mode
Breast productivity
Thyroid Productivity
LI-RADS®
Breast productivity with BI-RADS® and auto contour breast
Thyroid productivity with TI-RADS® and auto contour
Probe Check
Needle Recognition
Follow-up tool
DICOM® 3.0 connectivity
Whizz Label
Whizz Easy Style

System options

CW Doppler	
Curve AMM	
LOGIQ™ View	
Digital Expert	
Intensity Ratio	
Image Insights	
Whizz RenderLive	
Barcode reader	
B-Flow (B-Flow Color)	
Tissue Velocity Imaging (TVI) with Q-Analysis	
Time Velocity M-Mode Imaging	
Auto EF	
Static 3D/Real-time 4D	• TUI • VOCAL
Auto intima-media thickness	
V-live 2.0	

Peripheral options

Sony UP-D898MD B/W thermal printer
Sony UP-D898MD B/W thermal printer with fixture kit
Sony UP-898DC Printer
Sony UP-D25MD color thermal printer
1-pedal type footswitch 'Whanam FSU-1000'
3-pedal type footswitch 'MKF 2-MED USB GP26'
32 GB USB Stick
1 TB external USB HDD
1 TB Second SSD
DVD RW kit
USB ECG kits (AHA/IEC)
USB wireless adaptor (sales availability varies in different countries)
HP Office 200 printer
Video Output Adapter

Display modes

Live and stored display format	
Widescreen	• 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/M • B + CFM/M • Real-time triplex mode (B + CFM or PDI or B-Flow color+ PW)
Zoom	Write (HD)/read 67X
Colorized Image	• Colorized B • Colorized M • Colorized CW • Colorized 4D • Colorized B-Flow • Colorized PW • Colorized 3D
Timeline display	• Independent dual B/PW or CW display • Display Format – 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)
Virtual convex	
LOGIQ View	
TUI (Tomography Ultrasound Imaging)	

Selectable alternating modes

B/M
B/PW
B + CFM/M
B + CFM (PDI)/PW (CW)
Freehand 3D-Mode
Freehand 3D-Mode Color
B/CW
B + CFM (PDI)/CW
Multi-image split screen (quad screen)
Live and/or frozen
B + B/CFM or PDI
PW/M
Independent CINE playback

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: 4 types selectable	• MM/DD/YYYY • DD/MM/YYYY • YYYY/MM/DD • YYYY-MM-DD	
Time format: 2 types selectable	• 24 hours • 12 hours	
Gestational age from	• LMP • EDD	• GA • 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 marker		
Image depth		
Zoom depth		

B-Mode
Gain
Dynamic range
Imaging frequency
Edge enhance
Frame average
Frame rate
Gray map
SRI-HD
CrossXBeam
Whizz

Color Flow Mode
Line density
Frame average
Packet size
Color velocity range and baseline
Color threshold marker
Color gain
Invert
Doppler frequency

PDI Mode	
Line density	
Frame averaging	
Packet size	
Directional PDI	
Color threshold marker	
PDI gain	
Invert	
Color scale: 2 types	• Power • Directional PDI

Display annotation *(cont.)*

B-Flow/B-Flow Color Mode
Gain
Background
SRI-HD
Accumulation
Flow Type
Rejection
Colorize
Edge enhance
Gray map
Frame average
Power output
Sensitivity/PRI
Dynamic range
Frequency
Suppression
Flash suppression
Enhance
Threshold
Map compress
Map
Wall filter
Transparency Map

M-Mode
Gain
Compression
Sweep Speed
AMM
Curved AMM

Doppler Mode
Gain
Angle
Sample Volume depth and SV Length
Wall filter
Velocity and/or frequency scale
Spectrum invert
Sweep speed
Scale
Doppler frequency

3D/4D
Tile
Mix
Active curve
Reset curve
Lower Thresh.
Volume angle
B quality
3D orient
Render mode
Colorize
Direction
Render 1 gray
Render 2 gray
Transparency
Reference image
Cut mode
Cut depth
Depth
Rotational angle
Step angle
Rotation axis
Start angle
End angle
Loop speed
V-live 2.0

General system parameters

System setup	
9 pre-programmable categories	
User programmable preset capability	
Factory default preset data	
Languages	English, Latin American Spanish, French, German, Italian, Brazilian Portuguese, Chinese (simplified), Swedish, Russian, Norwegian, Danish, Dutch, Finnish
OB Report Formats: Tokyo Univ., Osaka Univ., USA, Europe, and ASUM	
User defined annotations	
Body patterns	
Customized comment home position	
Patient workflow: Traditional/simplified	

System scanning parameters
VisionBoost architecture
128 physical channels
8,899,048 system processing channels
Max. frame rate: 1789 fps, depending on probe and mode (Convex probe under whole view angle and 18 cm scanning depth, up to 46 fps; Sector probe under with view angle of 90˚ and 18 cm scanning depth, up to 81 fps)
Displayed imaging depth: 1 – 50 cm
Minimum depth of field: 0 – 1 cm (zoom), depending on probe
Maximum depth of field: 0 – 50 cm, depending on probe
Transmission focus: 1 – 8 focal points selectable, depending on probe and application
Continuous dynamic receive focus/aperture
Multi-frequency/wideband technology
Frequency range: 1.7 to 20 MHz
Shades of gray: 256
Systematic dynamic range: 275 dB
Adjustable Field of View (FOV): up to 179˚, depending on probe
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 per step
Adjustable dynamic range	36 – 96 dB, 3 or 6 dB per step
Frame averaging	8 steps
Gray scale map	8 types, depending on probe
Colorize	10 types
Frequency	Up to 4 selectable, depending on probe
Line density	Max. 852, 5/6 steps, depending on probe
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
Edge enhance	7 steps
Rejection	6 steps
Steered linear	± 12˚, ± 15˚, depending on probe
FOV or angle, depending on probe	
SRI-HD	Up to 7 levels selectable
CrossXBeam	Up to 9 angles selectable, depending on probe
Depth	1 – 50 cm, 0.5 cm or 1 or 2 per step, depending on probe

General system parameters *(cont.)*

Coded Harmonic Imaging	
Coded Phase Inversion Harmonic Imaging	
Available on all probes except cardiac probes	
Line density	5/6/7 steps, depending on probe
Line density zoom	5 steps
Suppression	6 steps
Edge enhance	7 steps
Gray scale map	8 types
Colorize	10 types
Gain	0 – 90 dB, 1 dB per step
Dynamic range	51 – 78 dB, 3 dB per step; 36 – 48/78 – 96 dB, 6 dB per step
Rejection	6 steps
Frequency	Up to 5 steps, depends on probes

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		
12 pre-programmable categories		
User programmable preset capability		
Compatible with	• Color Mode • SRI-HD • Virtual Convex	• PW • Coded Harmonic Imaging
Available on 4C-RS, L6-12-RS, E8C-RS, 8C-RS, RAB2-6-RS, L8-18i-RS, BE9CS-RS, E8Cs-RS, 12L-RS, LK760-RS, RIC5-9A-RS, C1-5-RS, 9L-RS, L3-12-RS, L4-20t-RS, IC9-RS, E7C8L-RS		

Color Flow Mode	
Baseline	0 – 100%, 10% per step
Invert	On/off
CF/PDI focus depth	Default pre-settable for 10 – 100% of ROI in depth, 15% or 20% per step
CF/PDI flash suppression	5 steps
CF/PDI angle steer	0, ± 10˚, ± 15˚, ± 20˚
Packet size	8 – 24, depending on probe and application
Line density	7 steps
Line density zoom	7 steps
Frame average	7 steps
PRF	0.1 – 25 KHz, 19 steps
Spatial filter	6 steps
Gain	0 – 40 dB, 0.5 dB per step
Wall filter	4 steps, depending on probe and application
Scanning size (FOV or angle)	Depending on probe
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 6 steps, depending on probe
Color maps, including velocity variance maps	20 types, depending on probe and application
Transparent map	5 steps
Color threshold	0 – 100%, 10% per step
Accumulation	5 steps
Flash suppression	

Power Doppler Imaging Mode	
PDI map	14 types
CF/PDI focus depth	Default pre-settable for 10 – 100% of ROI in depth, 15% or 20% per step
CF/PDI acoustic output	0 – 100%, 2%, 5% or 10% per step
CF/PDI angle steer	0, ± 10˚, ± 15˚, ± 20˚
Packet size	8 – 24, depending on probe and application
Spatial filter	6 steps

General system parameters *(cont.)*

Power Doppler Imaging Mode *(cont.)*	
Frame average	7 steps
PRF	0.1 – 25 KHz
Power threshold	0 – 100%, 10% per step
Gain	0 – 40 dB, 0.5 dB per step
Wall filter	4 steps, depending on probe and application
CF/PDI frequency	Up to 6 steps, depending on probe
Transparent map	5 steps
Invert	On/Off
Accumulation	8 steps

Auto Optimization	
Optimize B-Mode image to improve contrast resolution	
Selectable amount of contrast resolution improvement	
Auto-Spectral Optimize adjusts	• Baseline • Invert • PRF (on live image)

M-Mode	
Gain	-20 – 20 dB, 1 dB per step
Gray scale map	8 types, depending on probe
Colorize	10 types
Rejection	6 steps
M/PW display format	V-1/3B, V-1/2B, V-2/3B, H-1/2B, H-1/4B, timeline only (Vert 1/3B, Vert 1/2B, Vert 2/3B, Horiz 1/2B, Horiz 1/4B, TL only)
Dynamic range	36 – 96 dB 51 – 78 dB, 3 dB per step; 36 – 48/78 – 96 dB, 6 dB per step

Anatomical M-Mode
M-Mode cursor adjustable at any place
Can be activated from live scan, cine loop (frozen, or stored loop)
Measure and analysis capability
Available with Color Flow mode
Curved AMM

Pulse Wave Doppler Mode	
Acoustic power	0 – 100%, 2, 5 and 10 steps
Gain	0 – 85 dB, 1 dB per step
Gray scale map	Up to 8 types
PRF	0.3 – 27.9 KHz
Transmit frequency	1.7 – 10 MHz, depending on probe
Wall filter	5.5 – 5000 Hz, 27 steps, depending on probe
PW colorization	Up to 6 types
Velocity scale range	• 0.1 – 6670 cm/s • Sweep speed: 0 – 7, 8 steps
Sample volume depth	0.1 – 50 cm, 0.1 cm per step, depending on probe
SV gate	1, 2, 3, 4, 5, 6, 7, 8, 10, 12, 14, 16 mm
Angle correction	-90˚ – 90˚, 1˚ per step
Spectrum inversion	On/off
Duplex	Simultaneous: On/off (PW only)
PW angle steer	0˚, ± 10˚, ± 15˚, ± 20˚ (use angle steer of B-Mode)
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 per step

Continuous Wave Doppler Mode (option)	
Gray scale map	8 types
Baseline	11 steps
Angle correct	-90˚ – 90˚, 1˚ per step
Colorize	6 types
Invert	On/off
Gain	0 – 85 dB, 1 dB per step
Wall filter	5.5 – 5000 Hz, 27 steps, depending on probe and application

General system parameters *(cont.)*

Continuous Wave Doppler Mode (option) *(cont.)*	
CW-Mode includes	• Transmit frequency: 1.9, 4.2, 5, 6.2 MHz • CW colorization: tint map A/B/C/D/E/F • Velocity scale range: 0.2 – 6105 cm/s • Spectrum inversion: On/off • Trace method: Max, Mean, Off • Doppler Auto Trace: Frozen, Live, Off • Trace direction: Above, below, both
Trace sensitivity	0 – 40, 2 per step

Cine memory/image memory
Cine memory: 384 MB
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 memory/image memory *(cont.)*
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
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

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 356 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)

Connectivity and DICOM	
Ethernet network connection	• DICOM 3.0 (option) • Verify • Print • Store • Modality worklist • Storage commitment • Modality Performed Procedure Step (MPPS) • Query/retrieve • Structured reporting template (Can be compared to vascular and OB standard) • Remote capability InSite™ ExC • eDelivery

Virtual Convex
Provides a convex field of view
Compatible with CrossXBeam
Available on linear and sector transducers

General system parameters *(cont.)*

LOGIQ View (option)
Extended field of view imaging
Available on 4C-RS, L6-12-RS, 8C-RS, 3Sc-RS, E8C-RS, E8Cs-RS, RAB2-6-RS, L8-18i-RS, 6S-RS, BE9CS-RS, LK760-RS, 12L-RS, 12S-RS, C1-5-RS, RIC5-9A-RS, E7C8L-RS, L3-12-RS, 9L-RS, L4-20t-RS, IC9-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 160 cm scan length

Static 3D/Real-time 4D (option)	
Available on RAB2-6-RS and RIC5-9A-RS	
Acquisition modes	• Static 3D • Real-time 4D
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 render modes
Display format	• Quad: A-/B-/C-Plane/3D • Dual: A-Plane/3D • Single: 3D
Curved 3-point render start	
3D Movie	• Loop Speed: 6 – 400 • Scalpel: 3D cut tool • Cut mode: Inside Contour/ Outside • Contour/Inside Box/Outside Box/Small Eraser/Big Eraser • Cut depth: Full/UserDefine • Depth: 0 – 1000 • 3D rotation Cine • Rotational angle: 30 – 360˚ • Step angle: 1 – 15˚ • Rotation axis: X/Y • 3D volume review • Start frame: Define start frame • End frame: Define end frame • Run/Stop
TUI: Tomographic Ultrasound Imaging	• Display format: 1x1/1x2/2x2/3x3 • Slices: 3 – 19 • Slices distance: 0.5 – 40 mm
Real-time 4D	• 4D Volume Cine • LoopSpeed: 6 – 400 • Run/Stop
Niche	
VOCAL (option)	Virtual Organ Computer-aided Analysis

B-Flow/B-Flow Color (option)	
Avalable on 4C-RS, L6-12-RS, 12L-RS, C1-5-RS, 9L-RS, L3-12-RS, L4-20t-RS	
Background	On/off
Sensitivity/PRI	1 – 50, 17 steps
Line density	5 steps
Edge enhance	7 steps
Frame average	0 – 7, 8 steps
Gray scale map	8 maps
Tint map	5 maps
Dynamic range	36~48; 6 dB per step; 48~78: 3 dB per step; 78~96: 6 dB per step
Rejection	6 steps
Gain	0 – 90 dB range, 1 dB per step
Accumulation	8 levels

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
Q-Analysis: Multiple Time Motion trace display from selected points in the myocardium

TVM (option)
TVI with M-Mode active
Available on the sector probes
Provides both myocardium motion velocity and direction

General system parameters *(cont.)*

Breast Care

Breast Care provides a protocol of breast scanning which helps user to scan breast by 4 Quadrants or 12 O'clock and axillary fossa consistently. User can use 'P1' key to follow the scanning steps that allows user to focus on performing the exam rather than on controlling the system and can help user to increase consistency while reducing keystrokes. The system automatically invokes the correct modes, advances to the next step in the exam. After finishing whole scanning steps, report will be generated.
Breast Care does not perform automatic breast lesion detection or classification. The user is required to detect and diagnose any breast tissue abnormality, as well as verify any outputs of Breast Scanning, Breast Lesion M&A, BI-RADS® classification.
Breast care is divided into 3 steps: prepare the patient information, scanning and report.

Biopsy Guideline (Interactive needle line)

Biopsy Guideline (Interactive needle line) is a biopsy accuracy workflow feature powered by a dot line at front to indicate the movement direction of the needle, the angle of the line could be changed by knob under touch panel, the visible type of the line could be changed by touch panel button or physical user defined key if it is configured.

Follow-up tool

The Follow-up tool is intended to more accurately perform serial scans on a patient, and compare the images of a previous ultrasound exam to the current exam.

Breast productivity

Breast productivity includes auto contour feature and measurements related to breast (distance to nipple, ratio). BI-RADS® (Breast Imaging-Reporting and Data System) is also available to provide risk assessment and quality assurance.

Thyroid productivity

Thyroid productivity is a customizable workflow designed for thyroid scanning. With its guiding, user can complete various modes of imaging, measurement, TI-RADS nodule classification, and find positive area efficiently.

Needle recognition

Needle recognition functionality can enhance in-plane needles.
It is available on L6-12-RS, 9L-RS, 12L-RS, L3-12-RS, L4-20t-RS, 4C-RS, C1-5-RS and E7C8L-RS.

Scan Coach

Scan Coach is an on-demand tool available to help users acquire the right scan plane. The reference image indicates how the scan plane image for a given step should look, and the probe/beam anime image shows the corresponding probe placement to get the correct scan plane. The schema anime shows the key anatomical structures visualized in two dimensional mode.

- Abdomen
- Obstetrics
- Gynecology
- Cardiology
- Vascular
- MSK

My Trainer

Provides a quick guide to operate the system offering five sections: Getting Started, System Settings, Peripheral Connections, Maintenance and New Features.

Battery (option)

The lithium ion battery provides power when an AC power source is not available. Lithium ion batteries last a minimum 20 minutes of battery life with a full charged battery in use to supply power to the system.

Scan Assistant

Scan Assistant provides an automated exam script that moves you through an exam step-by-step. This allows you to focus on performing the exam rather than on controlling the system and can help you to increase consistency while reducing keystrokes.

CSD

CSD is a direct link with a GE HealthCare online service engineer or applications support engineer or a request for service.

Whizz

Whizz will continuously optimize the brightness, contrast and uniformity of B mode images when scanning different tissues. Whizz in PW/CW Doppler Mode optimizes the spectral data. Auto adjusts the Velocity Scale/PRF (live imaging only), baseline shift, and invert (if preset). Upon deactivation, the spectrum is still optimized.

Whizz Easy Style

Whizz Easy Style provides two presentation for appearance on tissue smoothness, contrast, border delineation and tissue differentiation. Whizz Easy Style is available now on 4C-RS, C1-5-RS, RAB2-6-RS and L3-12-RS probes with specific presets.

General system parameters *(cont.)*

Whizz CF Mode

Whizz CF optimizes images automatically by adjusting color flow gain according to noise of color image and depth of color ROI. Auto frequency adjusts the frequency with the depth changes.

Whizz Label

Whizz Label is a software technology utilizing Artificial Intelligence (AI) during ultrasound acquisition to automatically detect the liver, gallbladder, and/or right kidney during an ultrasound exam for documentation.

V-Live 2.0

Provides anatomical realism and increased depth perception with a moveable light source to highlight details within an area of interest in 3D and 4D scanning.

Digital Lateral Gain Compensation (LGC)

Digital Lateral Gain Compensation (Digital LGC) balances the image so that the density of echoes is evenly distributed across the image. It enables the user to adjust B-mode gain compensation in the longitudinal direction. 8 sections, 1 default setup, 3 customizable setup.

Intensity Ratio

Intensity Ratio (IR) is a generic measurement to calculate the ratio of two intensity (Echo Level, displays EL_dB) measurements. The formula is Intensity Ratio = Intensity A/Intensity B.

Breast productivity

Breast productivity allows the system to enter H&L measurement and BI-RADS after finishing Auto Contour measurement.

Thyroid Productivity

Thyroid Productivity allows the system to enter nodule measurement and TI-RADS after finishing Auto Contour measurement.

Digital Time Gain Compensation (Digital TGC)

Digital Time Gain Compensation (Digital TGC) amplifies returning signals to correct for the attenuation caused by tissues at increasing depths. Digital TGC slide pods are spaced proportionately to the depth. 10 sections, 9 default setup, 6 customizable setup.

Whizz Note

Whizz Note allows the system to display folders and files from removable media. The user can import and display useful clinical datasheet for reference during scanning.

Whizz Report

The ultrasound system enables the generation of patient reports based on the examination performed and the analyses that were made during the exam. Reports are generated using the data stored in the system with pre-selected template and may be edited, customized, deleted or added to while performing the exam. This ultrasound system allows users to create their own report template by a separate tool called Whizz Report Editor on users' personal computer. The template can be saved into an USB and imported to the ultrasound system.

Whizz RenderLive

Whizz RenderLive helps to find the render start position to easily separate solid tissue in front of the rendered object. The Whizz RenderLive algorithm “looks” for the transition from solid tissue to liquids and positions the “Render Start” into the liquid area for optimal adaptation to the rendered object.

V-Zoom

V-zoom is intended to zoom the full screen for selected ROI. It works for both Read Zoom and Write Zoom.

Digital Expert Connect*

Digital Expert Connect is a virtual collaboration tool that easily extends your team’s expertise with real-time connections throughout your network – anytime, anywhere. Digital Expert Connect is a self-contained, app-based companion solution, designed to pair with GE HealthCare and other ultrasound devices. With Digital Expert Connect, every clinician in your department can confidently and efficiently deliver care. It’s remote telementored ultrasound for a new telehealth world.

Imaging Insights

Imaging Insights automatically collects DICOM data from GE HealthCare and other vendors' ultrasound equipment or equipment fleet and displays system utilization and operator usage insights in a plotted dashboard. Operational insights include exam volumes, first and last exam time, probes utilization, exam type; operator usage data includes length of exam, scan mode, probes, and exam type. It helps optimize system and probe fleet investment plans, identify staff assignment and training needs, and monitor variability of staff usage patterns.

*Only for United States

General system parameters *(cont.)*

eDelivery

As part of the product lifecycle management, GE HealthCare regularly analyzes and integrates software updates from our third party vendors into our products. These are typically released as part of regular updates or software releases. The two available downloading options for eDelivery are:

- Through the GE HealthCare service platform on the ultrasound system. This requires Insite RSvP connectivity.
- Through an end-user portal to a local storage location (i.e. a readable/writeable flash drive with enough storage space) and install it on the ultrasound system.

Probe Check

Probe Check is a probe assessment tool that evaluates each probe element. Probes have to be clean, any gel residue will provide incorrect data. This test is an assessment that is intended to be used comparatively during the life of the probe to evaluate possible probe deterioration over time.

Controls available during scanning

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 • CrossXBeam Levels
PW-Mode	• Gain • Doppler Audio • Acoustic Output • Transmission Frequency • Scale • Wall Filter • Sample Volume Gate – Length – Depth • Volume
Color Flow mode	• CFM Gain • CFM Velocity Range • Acoustic Output • Wall Filter • Packet Size • Line Density • CFM Spatial Filter • CFM Frame Averaging • Frequency/Velocity Base Line Shift

Controls available on Freeze or Recall

Automatic Optimization
SRI-HD
CrossXBeam
3D reconstruction from a stored Cine loop
TGC
Colorized B and M
Dynamic range
AT (Acceleration Time)
ACC (Acceleration)
Anatomical M-Mode
Gray map
Post gain
Baseline shift (PW, CW)
Sweep speed
Compression
Rejection
Colorized spectrum
Display format
Angle Correct
Auto Angle Correct
Overall gain (loops and stills)
Color map
Transparency map
Frame averaging (loops only)
Flash suppression (disable in Freeze)
CFM display threshold
Spectral invert for Color/Doppler

Measurements/calculations

B-Mode
Depth and distance
Circumference (ellipse/trace)
Area (ellipse/trace)
Volume (ellipsoid)
% Stenosis (area or diameter)
Angle between two lines

M-Mode
M-Depth
Distance
Time
Slope
Heart rate

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)
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) • 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)
SonoBiometery	• BPD • HC • AC • HL • FL

Measurements/calculations *(cont.)*

OB measurements/calculations *(cont.)*

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

Fetal Growth Charts

Multigestational calculations

Anatomical survey

Biophysical profile

Programmable OB tables

Over 20 selectable OB calculations

Expanded worksheets

Auto Bladder Volume

Auto Bladder Volume automatically measures the Bladder Volume. It's main application is to measure three longest orthogonal lines (L, H and W) from two bladder slices.

Auto Intima Media Thickness (IMT)

Auto IMT automatically measures the thickness of the Intima Media on the far and near vessel walls.

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 Resistive Index

Uterine Resistive Index

Follicular measurements

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

Urological calculations

Volume (Auto Bladder volume)

Prostate volume

Left/right renal volume

Generic volume

Post-void bladder volume

Measurements/calculations *(cont.)*

Cardiac – 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 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 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 Mass Index (LVPWd, LVPWs) • Ejection Fraction, Teichholz/Cube (LVIDd, LVIDs) • Left Ventricle Posterior Wall Fractional Shortening (LVPWd, LVPWs) • Mitral Valve • Mitral Valve Annulus Diameter (MV Ann Diam) • E-Point-to-Septum Separation (EPSS) • Mitral Valve Area Planimetry (MVA Planimetry)
Pulmonic valve	Pulmonic Diameter (Pulmonic Diam)
Right ventricle	• Right Ventricle Internal Diameter (RVIDd, RVIDs) • Right Ventricle Outflow Tract Diameter (RVOT Diam)
System inferior vena cava	Systemic Vein Diameter (Systemic Diam)

Cardiac – M-Mode measurements

Aorta	• Aortic Root Diameter (Ao Root Diam) • 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 Volume, Teichholz/Cubic (LVIDd, LVI Ds) • Left Ventricle Posterior Wall Thickness (LVPWd, LVPWs) • Left Ventricle Ejection Time (LVET) • Left Ventricle Pre-Ejection Period (LVPEP) • Interventricular Septum (IVS)
Mitral valve	• E-Point-to-Septum Separation (EPSS) • 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 Internal Diameter (RVIDd, RVIDs) • Right Ventricle Outflow Tract Diameter (RVOT Diam) • Right Ventricle Ejection Time (RVET) • Right Ventricle Pre-Ejection Period (RVPEP)
Tricuspid valve	QRS complex to end of envelope (Q-to-TV close)

Cardiac – Doppler Mode measurements

Aortic valve	• 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 Deceleration Time (AV Trace) • Aortic Valve Ejection Time (AVET) • Aortic Valve Area according to PHT

Measurements/calculations *(cont.)*

Cardiac – Doppler Mode measurements *(cont.)*	
Left ventricle	• Left Ventricle Outflow Tract Peak Pressure Gradient (VLOT Vmax) • Left Ventricle Outflow Tract Peak Velocity (LVOT Vmax) • Left Ventricle Outflow Tract Mean Pressure Gradient (LVOT Trace) • Left Ventricle Outflow Tract Velocity Time Integral (LVOT Trace) • Left Ventricle Ejection Time (LVET)
Mitral valve	• 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 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 Acceleration Time/ Deceleration Time Ratio (MVAcc/ Dec. Time)
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 Peak Pressure • 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)

Measurements/calculations *(cont.)*

Cardiac – Doppler Mode measurements *(cont.)*

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

Cardiac – Color Flow Mode measurements

Aortic valve	• 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 Flow (MR Trace) • Proximal Isovelocity Surface Area: Regurgitant Volume Flow (MR Trace) • Proximal Isovelocity Surface Area: Aliased Velocity (MR Vmax)

Cardiac – Combination Mode measurements

Aortic valve	• Aortic Valve Area (Ao Diam., LVOT Vmax, AV Vmax) • Aortic Valve Area by Continuity Equation by Peak Velocity (Ao Diam, LVOT Vmax, AV Vmax) • Stroke Volume by Aortic Flow (AVA Planimetry, AV Trace) • Cardiac Output by Aortic Flow (AVA Planimetry, AV Trace, HR) • Aortic Valve Area by Continuity Equation VTI (Ao Diam, LVOT Vmax, AV Trace)
Left ventricle	Cardiac Output, Teichholz/Cubic (LVIDd, LVI Ds, HR)
Mitral valve	• Stroke Volume by Mitral Flow (MVA Planimetry, MV Trace) • Cardiac Output by Mitral Flow (MVA Planimetry, MV 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

Probes

C1-5-RS	
Convex probe	
Applications	Abdomen, Fetal/OB, GYN, Vascular/Peripheral Vascular, Urology, Pediatric, MSK Conventional, Thoracic/Pleural, Interventional Guidance
Number of elements	192
Convex radius	55 mm
FOV	70˚
Footprint	69.3 x 17.2 mm
Frequency range	2.0 – 5.0 MHz
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, 2.5, 2.8, 3.1, 3.6 MHz
PWD frequency	2.0, 2.8, 3.6 MHz
Biopsy guide	Multi-angle, reusable bracket

4C-RS	
Convex probe	
Applications	Abdominal, Fetal/OB, GYN, Vascular/Peripheral Vascular, Urology, Pediatric, MSK Conventional, Thoracic/Pleural, Interventional Guidance
Number of elements	128
Convex radius	60 mmR
FOV	58˚
Footprint	66.2 x 18.3 mm
Frequency range	2.0 – 5.0 MHz
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 MHz (CFM/PDI), 2.5, 2.8, 3.3 MHz
Biopsy guide	Multi-angle

RAB2-6-RS	
Convex volume probe	
Applications	Abdomen, Fetal/OB, GYN, Urology, Interventional Guidance
Number of elements	128
Convex radius	47.1 mmR
FOV	70˚ (B), 84˚ x 70˚ (volume scan)
Footprint	62.2 x 34.0 mm
Frequency range	2.0 – 6.0 MHz
Volume sweep radius	24.11 mm
B-Mode imaging frequency	3.0, 4.0, 5.0 MHz
Harmonic imaging frequency	4.0, 5.0, 6.0 MHz
CFM/PDI/PWD frequency	2.0, 3.0, 4.0 MHz
Biopsy guide	Multi-angle, reusable bracket

8C-RS	
Micro convex probe	
Applications	Pediatric, MSK Conventional, Cardiac Pediatric, Transcranial, Interventional Guidance
Number of elements	128
Convex radius	10.73 mm
FOV	131˚
Footprint	22.0 x 12.0 mm
Frequency range	4.2 – 10.0 MHz
B-Mode imaging frequency	6.0, 8.0, 10.0 MHz
Harmonic imaging frequency	6.0, 7.0, 8.0, 10.0 MHz
CFM/PDI/PWD frequency	4.2, 5.0, 6.3 MHz
Biopsy guide	Not available

Probes *(cont.)*

L4-20t-RS	
Linear probe – single crystal	
Applications	Vascular/ Peripheral Vascular, Pediatric, Small parts, MSK Conventional, MSK Superficial, Thoracic/Pleural, Interventional Guidance
Number of elements	256
Footprint	48.43 x 11.56 mm
B-Mode imaging frequency	6.0/10.0/12.0/16.0 MHz
Frequency range	5.0 – 20.0 MHz
Harmonic imaging frequency	8.0/12.0/16.0/20.0 MHz
CFM/PDI/PWD frequency	5.0/6.3/7.1/8.3/10.0 MHz
Steered angle	± 20˚
Biopsy guide	Multi-angle, reusable bracket

L8-18i-RS	
Linear probe	
Applications	Vascular/Peripheral Vascular, Small parts, MSK superficial, Interventional Guidance
Number of elements	168
Footprint	34.8 X 11.1 mm
Frequency range	6.7 – 18 MHz
B-Mode imaging frequency	8.0, 12.0, 14.0, 16.0 MHz
Harmonic imaging frequency	9.0, 15, 18.0 MHz
CFM/PDI/PWD frequency	6.7, 8.3, 10 MHz
Steered angle	± 20˚
Biopsy guide	Not available

L3-12-RS	
Linear probe	
Applications	Vascular/Peripheral Vascular, Pediatric, Small parts, MSK Conventional, MSK Superficial, Thoracic/Pleural, Interventional Guidance
Number of elements	256
Footprint	60.9 x 12.9 mm
Frequency range	3.6 – 12 MHz
B-Mode imaging frequency	5.0, 7.0, 9.0, 11 MHz
Harmonic imaging frequency	8, 10, 12 MHz
CFM/PDI frequency	3.6, 4.2, 5.0, 6.3, 7.7, 9.1 MHz
PWD frequency	3.6, 4.2, 5.0, 6.3, 8.8 MHz
Steered angle	± 20˚
Biopsy guide	Multi-angle, reusable bracket

12L-RS	
Linear probe	
Applications	Vascular/Peripheral Vascular, Small parts, Pediatrics, MSK Conventional, MSK Superficial, Thoracic/Pleural, Interventional Guidance
Number of elements	192
Footprint	47.1 x 12.7 mm
Frequency range	4.2 – 13.0 MHz
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
CFM/PDI/PWD frequency	4.2, 6.3, 7.7 MHz
Steered angle	± 20˚
Biopsy guide	Multi-angle, reusable bracket

Probes *(cont.)*

9L-RS	
Linear probe	
Applications	Abdomen, Vascular/Peripheral Vascular, Small parts, Pediatrics, MSK Conventional, MSK Superficial, Thoracic/Pleural, Interventional Guidance
Number of elements	192
Footprint	53 x 14.1 mm
Frequency range	4.0 – 10.0 MHz
B-Mode imaging frequency	5.0, 7.0, 9.0 MHz
Harmonic imaging frequency	6.0, 8.0, 10.0 MHz
CFM/PDI/PWD frequency	4.0, 5.0 MHz
Steered angle	± 30˚
Biopsy guide	Multi-angle, reusable bracket

L6-12-RS	
Linear probe	
Applications	Vascular/Peripheral Vascular, Small parts, Pediatrics, MSK Conventional, MSK Superficial, Thoracic/Pleural, Interventional Guidance
Number of elements	128
Footprint	47 x 11.4 mm
Frequency range	4.0 – 13.0 MHz
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 frequency	4.0, 5.0, 6.0 MHz
PWD frequency	4.0, 4.5, 5.0 MHz
Steered angle	± 20˚
Biopsy guide	Multi-angle, reusable bracket

LK760-RS (Vet)	
Linear probe	
Applications	MSK Conventional
Number of elements	128
Footprint	67.0 x 13.0 mm
Frequency range	3.5 – 10.0 MHz
B-Mode imaging frequency	5.0, 7.0, 9.0 MHz
Harmonic imaging frequency	6.0, 8.0, 10.0 MHz
CFM/PDI/PWD frequency	3.5, 4.2, 5.0 MHz
Steered angle	± 10˚
Biopsy guide	Not available

12S-RS	
Phased array sector probe	
Applications	Vascular/Peripheral Vascular, Pediatric, Cardiac Pediatric, Transcranial, Interventional Guidance
Number of elements	96
FOV	120˚
Footprint	17.6 x 13.2 mm
Frequency range	4.2 – 12 MHz
B-Mode imaging frequency	6.0, 8.0, 10.0, 11.0 MHz
Harmonic imaging frequency	9.0, 10.0, 12.0 MHz
CFM/PDI/PWD frequency	4.5, 5.0, 5.6, 6.7 MHz
CW frequency	4.2, 5.0, 6.2 MHz
Biopsy guide	Not available

Probes *(cont.)*

6S-RS	
Phased array sector probe	
Applications	Vascular/Peripheral Vascular, Pediatric, Cardiac Pediatric, Transcranial, Interventional Guidance
Number of elements	64
FOV	120˚
Footprint	23.5 x 16.8 mm
Frequency range	3.0 – 7.0 MHz
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
CWD frequency	4.2 MHz
Biopsy guide	Not available

3Sc-RS	
Phased array sector probe	
Applications	Abdomen, Vascular/Peripheral Vascular, Cardiac Adult, Cardiac Pediatric, Thoracic/Pleural, Transcranial, Interventional Guidance
Number of elements	64
FOV	120˚
Footprint	23.7 x 18.4 mm
Frequency range	1.7 – 4.0 MHz
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

RIC5-9A-RS	
Convex volume probe	
Applications	Fetal/OB, GYN, Urology, Transvaginal, Transrectal, Interventional Guidance
Number of elements	192
Convex radius	10.1 mmR
FOV	179˚
Footprint	20.96 x 23.35 mm
Frequency range	4.2 – 10.0 MHz
B-Mode imaging frequency	5.0, 7.0, 9.0 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

IC9-RS	
Endo micro convex probe	
Applications	Fetal/OB, GYN, Urology, Transvaginal, Transrectal, Interventional Guidance
Number of elements	192
Convex radius	9.24 mm
FOV	179˚
Footprint	19.6 x 13.6 mm
Frequency range	3.6 –9.0 MHz
B-Mode imaging frequency	6.0/7.0/8.0 MHz
Harmonic imaging frequency	7.0/7.5/8.0/8.5/9.0 MHz
CFM/PDI/PWD frequency	CFM/PDI: 4.2/5.0/5.9/6.7 MHz PW:3.6/4.2/5.0/6.3 MHz
Biopsy guide	Fixed angle, disposable or reusable bracket

Probes *(cont.)*

E8Cs-RS	
Endo micro convex probe	
Applications	Fetal/OB, GYN, Urology, Transvaginal, Transrectal, Interventional Guidance
Number of elements	128
Convex radius	8.73 mmR
FOV	168˚
Footprint	18.6 x 13.9 mm
Frequency range	4.0 – 10.0 MHz
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

E8C-RS	
Endo micro convex probe	
Applications	Fetal/OB, GYN, Urology, Transvaginal, Transrectal, Interventional Guidance
Number of elements	128
Convex radius	10.73 mm
FOV	128˚
Footprint	16.9 x 21.2 mm
Frequency range	4.2 – 10.0 MHz
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

E7C8L-RS	
Micro curve part	
Applications	Urology, Transrectal, Interventional Guidance
Number of elements	128
Convex radius	8 mm
FOV	136˚
Footprint	17.2 x 10.3 mm
Frequency range	5.0 – 10.0 MHz
B-Mode imaging frequency	6.0, 8.0, 10.0 MHz
Harmonic imaging frequency	8.0, 10.0 MHz
CFM/PDI/PWD frequency	5.0, 6.7 MHz
Biopsy guide	Multi-angle, reusable bracket
Linear part	
Applications	Urology, Transrectal, Interventional Guidance
Number of elements	128
Footprint	57.6 x 9.1 mm
Frequency range	5.0 – 10.0 MHz
B-Mode imaging frequency	6.0, 8.0, 10.0 MHz
Harmonic imaging frequency	8.0, 10.0 MHz
CFM/PDI/PWD frequency	5.0, 6.7 MHz
Steered angle	± 20˚
Biopsy guide	Multi-angle, reusable bracket

BE9CS-RS	
Simultaneous bi-plane, micro convex probe	
Applications	Urology, Transrectal, Interventional Guidance
Number of elements	96
Convex radius	9 mm
FOV	133˚
Footprint	19 x 18.7 mm
Frequency range	4.0 – 10.0 MHz
B-Mode imaging frequency	6.0, 8.0, 10.0 MHz
Harmonic imaging frequency	8.0, 9.0, 10.0 MHz
CFM/PDI/PWD frequency	4.0, 5.0, 6.3 MHz
PW frequency	4.2, 5.0, 6.3 MHz
Biopsy guide	Fixed angle, disposable or reusable bracket

Inputs and outputs

S-Video output (option)
HDMI output (1920 x 1080 resolution)
Ethernet (RJ45)
USB (3x in rear, 2 beside touch panel)

Safety conformance

The Versana Premier is CE marked to the MDR – REGULATION (EU) 2017/745 on medical devices

Conforms to the following standards for safety	• IEC 60601-1 Medical electrical equipment – Part 1: General requirements for basic safety and essential performance • IEC 60601-1-2 Medical electrical equipment – Part 1-2: General requirements for basic safety and essential performance – Collateral Standard: Electromagnetic disturbances – 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 basic safety and essential performance of ultrasonic medical diagnostic and monitoring equipment • ISO 10993-1 Biological evaluation of medical devices – Part 1 Evaluation and testing within a risk management process • EN 62366 Medical devices – Application of usability engineering to medical devices

About GE HealthCare Technologies Inc.

GE HealthCare is a leading global medical technology, pharmaceutical diagnostics, and digital solutions innovator, dedicated to providing integrated solutions, services, and data analytics to make hospitals more efficient, clinicians more effective, therapies more precise, and patients healthier and happier. Serving patients and providers for more than 100 years, GE HealthCare is advancing personalized, connected, and compassionate care, while simplifying the patient's journey across the care pathway. Together our Imaging, Ultrasound, Patient Care Solutions, and Pharmaceutical Diagnostics businesses help improve patient care from diagnosis, to therapy, to monitoring. We are a $19.6 billion business with 51,000 colleagues working to create a world where healthcare has no limits.

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