Vivid™ S6
Product Description
The **Vivid S6** is a high-performance ultrasound system for cardiovascular and shared services applications. It offers an innovative ergonomic design, superb image quality, advanced connectivity, productivity tools and advanced technology. Compatibility with the Vivid product family offers flexibility in lab configuration and upgrade opportunities. Enjoy increased diagnostic confidence and a high standard of productivity.

System Architecture
The **Vivid S6** is based on GE’s TruScan architecture common to all GE Ultrasound systems, EchoPAC™-PC workstation, EchoPAC software and network solutions. It features a software-driven, PC-based platform, raw data storage with advanced post-processing capabilities, seamless DICOM Standard connectivity, and compatibility with the GE family of cardiovascular ultrasound systems. Innovative tools offer advanced connectivity, remote monitoring, and consultation to improve productivity and quality of care.

**Coded Harmonics** – Produces excellent quality images even from difficult-to-image patients.

Data Acquisition
- Programmable system architecture
- Application-specific channel architecture: the Vivid S6 employs a flexible, digital beam-former architecture capable of using up to 2048 channels depending on specific application requirements
- Application-specific digital beam forming algorithm for each mode
- Supports phased array, linear and curved array, TEE and non-imaging pencil transducers
- Receive focusing, aperture, apodization and frequency response are all continuously variable as a function of depth
- Wide-aperture mode for improved penetration on convex and linear array probes

Data Processing
- Echo data processing of phase, amplitude and frequency
- Easily upgradeable
- Digital raw data replay allows for image post processing and uncompromised offline measurement and analysis

Display Screen
- High-resolution, wide field-of-view, flat 17-inch TFT LCD screen
- Display Size: 1280 x 960 pixels with 256 shades of gray and 16.7 million simultaneous colors available
- Scanner software supports display resolution of 800 x 600 pixel
- Screen tilts at angle of 20° backwards to 10° forward
- Screen swivel at angle: 22° left or right
- Screen can be tilted forward horizontally for mobility and transportation
- Wide-angle visibility
- Automatic or manual digital brightness and contrast adjustment for optimal viewing in different ambient light conditions
- Separate adjustment for external monitor brightness/contrast

Display Formats
- Instant-review screen displays 12 simultaneous loops/images for a quick study review
- Scanplane position indicator and probe temperature are displayed with all multi-plane TEE probes
- Image orientation marker
- Selectable display configuration of duplex and triplex modes: side-by-side or top-bottom during live, digital replay and clipboard image recall
- Single, dual and quad-screen view
- Split-screen view

Display Annotations
- Mechanical Index (MI)
- Thermal index: application dependent
- Patient name/ID and additional patient information
- Hospital name
- Time/date
- Trackball-driven annotation arrows
- Scanning parameters
- Application
- Probe name
- Stress protocol parameters
- Active mode display
- Parameter annotation follow ASE standard
- Multi-language support for user interface, keyboard overlay, reports and documentation

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Tissue Imaging

General
- Variable transmit frequencies for resolution/penetration optimization
- High Resolution (HR)–zoom or display-zoom with zoom area control
- Variable contour filtering for edge enhancement
- Variable dynamic range and transmit power settings
- Depth range up to 30 cm – probe specific
- Selectable grayscale parameters: gain, reject, gray-maps, DDP, persistence and compression – can be adjusted in live, digital replay and image clipboard recall
- Automatically calculated TGC curves require less operator interaction
- Continuous Tissue Optimization (CTO) of the 2D-mode image to optimize the uniformity and brightness of the tissue continuously in real-time
- Selectable Automatic Tissue Optimization (ATO) of the 2D-mode image in digital replay or image clipboard recall. ATO may be combined with CTO – user selectable
- Clear Vessel (patent pending): aims to reduce reverberations and clutter noise while scanning the carotid
- Smart depth: automatically optimizing transmit pattern parameters according to scan-depth setting (option)

2D-mode
- Sector tilt and width control
- Coded Octave Imaging (COIL): second-generation harmonic tissue imaging providing improved spatial and contrast resolution over conventional imaging* – features reduced noise and improved wall definition without sacrificing frame rate making it the tissue well-suited in most cases, for all patient groups
  * Comparative claims made throughout this document are comparing Vivid S6 imaging to conventional imaging techniques.
- Confocal imaging: allows multiple transmit focal zones over range of view and a high-vector density – probes dependent and user adjustable
- Expanded cardiology performance on the M4S-RS probe, including six levels of harmonics and ultra-high frame rates
- Harmonic tissue imaging on all linear and convex probes
- Adaptive reject for improved cardiac IQ
- UD Clarity and UD Speckle reduce imaging – an advanced image processing technique to remove speckle in real time examining the relative difference between neighboring pixel values and determining whether the grayscale variations have a sharp difference, follow a trend, or are random in nature
- Coded Phase Inversion (CPI) for improved contrast resolution
- Variable image width: a reduction either increases frame rate or allows to increase the number of focal zones while maintaining the frame rate – application dependent on linear/convex array probes
- Multiple-angle compound imaging: multiple co-planar images (on 4C-RS and on linear probes) from different angles combined into a single image in real time improving border definition, contrast resolution and reducing angular dependence of border or edge
- Virtual convex: provides a larger field-of-view in the far field on Linear probes (option)
- Virtual apex: provides a wider field-of-view with phased array probes, effective with certain applications
- Dual focus (on cardiac applications): offers additional focal zone for added spatial and contrast resolution from heart base up to apical areas (cardiology application only)
- Left/right and up/down invert in live, digital replay or image clipboard recall
- Digital replay for retrospective review or automatic looping of images allowing for adjustment of parameters such as gain, compression, reject, anatomical M-mode, persistence and replay speed
- Data Dependent Processing (DDP) performs temporal processing, which reduces random noise but leaves motion of significant tissue structures largely unaffected – can be adjusted even in digital replay
- Different gray and colorized 2D maps – user selectable in real-time, digital replay or image clipboard recall

M-mode
- Trackball-steerable M-mode line available with all imaging probes – max steering angle is probe dependent
- Simultaneous real-time 2D-mode and M-mode
- M-mode PRF 1 kHz: all image data acquired are combined to give high-quality recording regardless of display scroll speed
- Digital replay for retrospective review of spectral data
- Several top-bottom formats, side-by-side format and time-motion-only format – can be adjusted in live or digital replay
- Selectable horizontal scroll speed: 1, 2, 3, 4, 6, 8, 12, 16 seconds across display
• Horizontal scroll can be adjusted in live, digital replay or image clipboard recall

Anatomical M-mode
• Vingmed®-patented, any plane M-mode display derived from 2D cine loop
• M-mode cursor can be adjusted at any plane
• Can be activated from real-time scan, digital replay or image clipboard recall
• Anatomical color M-mode available in real-time scan, digital replay or image clipboard recall
• Measurement and analysis capability
• Anatomical tissue velocity M-mode (option)

Color Doppler
General
• Steerable color Doppler available with all imaging probes – max steering angle is probe dependent
• Trackball-controlled Region of Interest (ROI) position/size
• Removal of color map from the tissue during digital replay or image clipboard recall
• Digital replay for retrospective review of color or color M-mode data allowing for adjustment of parameters, such as color/tissue priority and color gain, even on stored data
• Powerful digital signal processing maintaining high color frame rates of more than 300 fps – application and transducer dependent
• PRF settings: user selectable
• Advanced regression wall filter gives efficient suppression of wall clutter
• For each encoding principle, multiple-color maps can be selected, including variance maps, in live digital replay or image clipboard recall
• More than 65,000 simultaneous colors processed providing smooth display, 2D color maps containing a multitude of color hues
• Simultaneous display of grayscale 2D and 2D with color flow in live or digital replay or image clipboard recall
• Color invert: user selectable in live or digital replay or in image clipboard recall
• Variable color baseline: user selectable in live or digital replay or in image clipboard recall
• Multivariate color priority function gives reliable delineation of disturbed flows even across bright areas of the 2D-mode image
• Color Doppler frequency can be changed independently from 2D for optimal flow

Color Doppler Imaging
• Digital signal processing power maintains high frame rates with large Region of Interests (ROIs) even for very low PRF settings
• Variable Region of Interest (ROI) size in width and depth
• User-selectable radial and lateral averaging to reduce statistical uncertainty in the color velocity and variance estimates
• Data Dependent Processing (DDP) performs temporal processing and display smoothing to reduce possibility for loss of transient events of hemodynamic significance
• Digital replay for retrospective review or automatic looping of color images allowing for adjustment of parameters such as DDP, baseline shift, color maps, color/tissue priority and color gain even on frozen/recalled data
• Application-dependent multivariate motion discriminator reduces flash artifacts
• “Smart Depth”: automatically adjusts transmit pattern parameters according to depth of color ROI (option)
• Multiple-angle compound imaging in 2D mode is maintained while in Color Doppler mode

Color Angio (Color Intensity Imaging)
• Angle-independent mode for visualization of small vessels with increased sensitivity compared to standard color flow

Color M-mode
• Variable Region of Interest (ROI) length and position – user selectable
• User-selectable radial averaging to reduce statistical uncertainty in the color velocity and variance estimates
• Selectable horizontal scroll speed: 1, 2, 3, 4, 6, 8, 12, 16 seconds across display – can be adjusted during live, digital replay or image clipboard recall
• Real-time 2D image while in color M-mode
• Same controls and functions available as in standard 2D color Doppler

Anatomical Color M-mode
• Vingmed-patented, any plane, color M-mode display derived from color Doppler cine loop
• Available in real-time scan, digital replay or image clipboard recall
• Also applicable to Tissue Velocity Imaging (option)
• Measurement and analysis capability
B-Flow (option)
• B-Flow is a digital imaging technique that provides real-time visualization of vascular hemodynamics by directly visualizing blood reflectors and presenting this information in a grayscale display
• Use of GE-patented techniques to boost blood echoes and to preferentially suppress non-moving tissue signals
• B-Flow is available for most vascular and shared service applications

Blood Flow Imaging (BFI) (option)
• Combines color Doppler with grayscale speckle imaging
• Allows better delineation of blood flow without bleeding into tissue or vessel wall

Spectral Doppler
General
• Operates in PW, HPRF PW and CW modes
• Trackball-steerable Doppler available with all imaging probes – max steering angle is probe dependent
• Selectable Doppler optimization
• Real-time duplex or triplex operation in PW Doppler mode for all velocity settings
• Frame rate control for optimized use of acquisition power between spectrum, 2D and color Doppler modes in duplex or triplex modes
• Spectral analysis with an equivalent DFT rate of 0.2 ms
• Automatic Spectrum Optimization (ASO) provides a single press, automatic, real-time optimization of PW or CW spectrum scale, and baseline display
• Dynamic gain compensation for display of flows with varying signal strengths over the cardiac cycle
• Dynamic reject gives consistent suppression of background – user selectable in real-time, digital replay or image clipboard recall
• Digital replay for retrospective review of spectral Doppler data
• Several top-bottom formats, side-by-side format and time-motion only format – can be adjusted in live or digital replay or in image clipboard recall
• Selectable horizontal scroll speed: 1, 2, 3, 4, 6, 8, 12, 16 seconds across display – can be adjusted in live or digital replay or in image clipboard recall
• Adjustable spectral Doppler display parameters: gain, reject, compress, color maps – can be adjusted in live or digital replay or in image clipboard recall

PW/HPRF PW Doppler
• Automatic HPRF Doppler maintains its sensitivity even for shallow depths and with the highest PRFs
• Digital velocity tracking Doppler employs processing in range and time for high-quality spectral displays
• User-adjustable baseline shift in PW live, digital replay and image clipboard recall
• Adjustable sample volume size of 1-15 mm (probe dependent)
• Maximum sample volume depth 30 cm

Tissue Doppler Imaging
• Myocardial PW Doppler provides real-time Doppler spectral information for specified myocardial motion allowing for instantaneous tissue velocity measurement

CW Doppler
• Highly sensitive steerable CW available with all phased array and pencil probes

Tissue Velocity Imaging and Tissue Tracking
Tissue Velocity Imaging – TVI
• Myocardial Doppler imaging with color overlay on tissue image
• Tissue Doppler data can be acquired in background during regular 2D imaging
• Segmental wall motion analysis can be obtained with use of anatomical M-mode from digital replay or image clipboard recall
• Tissue color overlay can be removed to show just the 2D image, still retaining the tissue velocity information

Tissue Tracking
• Real-time display of the time integral of TVI for quantitative display of myocardial systolic displacement
• Myocardial displacement is calculated and displayed as a color-coded overlay on the grayscale and M-mode image – different colors represent different displacement ranges
Tissue Synchronization Imaging – TSI (option)

- Parametric imaging which gives information about synchronicity of myocardial motion
- Delayed myocardial segments produce red overlay whereas segments moving in normal rhythm are green
- Waveform trace available to obtain quantitative time to peak measurement from TSI image
- Available in live scanning as well as an offline calculation derived from TVI data including velocity trace visualization

Strain/Strain Rate Imaging (option)

- Tissue deformation (Strain) and rate of deformation are calculated and displayed as real-time, color-coded overlay on the 2D Image

Automated Function Imaging (AFI) (option)

- Parametric imaging tool which gives quantitative data for global and segmental wall motion
- A decision support tool for regional assessment of the LV systolic function
- Allows assessing the complete Left Ventricle with all segments at a glance by combining three longitudinal views into one comprehensive bulls-eye view
- Integrated into M&A package with worksheet summary
- 2D strain based data moves into clinical practice
- Simplified workflow with adaptive ROI, quick tips and combined display of traces from all segments

Automated Ejection-Fraction Calc (option)

- Automated EF measurement tool based on 2D-speckle tracking algorithm
- Integrated into M&A package with worksheet summary

Cine Memory

- Holds up to 180,000 frames (with default image settings: 2,500 to 5,600)
- High-fidelity loops and images may be reviewed by scrolling or by running cine loops
- TruScan architecture offers broad post-processing capabilities of recalled images and loops allowing manipulation of parameters such as gain, baseline, color maps, sweep speeds and cine speed
- “Image Clipboard” for thumbnail storage and review of saved images and loops
- Trackball-controlled cine review

Uninterruptible Power Supply

- In case of power failure or accidental shutdown, when power is restored within less than 10 minutes, the system automatically turns on instantly, maintaining exact system state prior to shutdown
- For longer periods of power interruptions, the system automatically saves data and turns off into “Standby” mode

Physiological Traces

- Integrated ECG or external ECG lead input
- Internally generated respiratory trace using ECG leads (option)
- External respirator interface (option)
- High-resolution display of the ECG and respiratory trace
- User Adjustable trace gain/position and trace-invert controls
- User pre-settable trace gain/position control
- Automatic QRS complex detection

Analysis Program

- Personalized measurement protocols allow individual set and order of measurement and analysis items
- Measurements can be labeled seamlessly by using protocols or post assignments
- Bodymark icons for location and position of probe
- Cardiac calculation package including extensive measurements and display of multiple repeated measurements
- Vascular measurements package
- Measurements assignable to protocol capability
- Parameter annotation follow ASE standard
- Measurements assignable to report generator
- Doppler auto trace function with automatic calculations in both live or digital replay or image clipboard recall
- Seamless data storage and report creation
- Measurements are summarized in worksheets – individual results can be edited or deleted
- User-assignable parameters
- Report templates can be customized on board
- ASE-based default text modules (English) – user customizable
- Image view during reporting
- Ability to export Report in PDF or CHM format
- Generate report templates by the Report Designer or import from EchoPAC PC
Smart Stress Echo (option)
- Stress package with memory buffer offers pharmaceutical, treadmill and bicycle stress exam protocols with user-configurable templates and shuffle mode
- “Smart Stress” function with the ability to save over 17 imaging parameters from each imaging plane – these imaging parameters are recalled at each stress level, thereby requiring no system adjustments
- Reference loop display during acquisition for comparing resting images or previous-level images to each stress level (dual screen)
- Advanced and flexible stress-echo examination capabilities
- Image acquisition, review, all-segment scoring and reporting
- Stress treadmill-exercise with more than 120 seconds of raw data continuous capture
- Possibility of extensive post-processing of images under review
- Wall motion scoring (Bulls-eye and segmental)
- Template Editor to customize the number of stress levels, number of views, number of heart cycles, and systolic or full-cycle capture

OB/GYN Application Module (option)
- OB package for fetal growth analysis containing more than 100 biometry tables
- Dedicated OB/GYN reports
- Fetal graphical growth charts
- Growth percentiles
- Multi-gestational calculations (up to four)
- Programmable OB tables
- Expanded worksheets
- User-selectable fetal growth parameters based on European, American or Asian methods charts
- GYN package for ovary and uterus measurements and reporting

Quantitative Analysis (Q Analysis) (option)
- Q analysis software package, designed for analysis of TVI related (Tissue Tracking, Strain, Strain rate, TSI) raw data
- Quantitative profiles for TVI, tissue tracking, strain and strain rate can be derived. Up to eight traces can be generated from selected points in the myocardium
- Sample-area points may be dynamically anchored to move with the tissue when running the cineloop
- Arbitrary Curved anatomical M-Mode
- Cine compound displays cineloops generated from a temporal averaging of multiple consecutive heart cycles
- Quantitative profiles (Q-Analysis) can be derived on data transferred to EPPC workstation

Intima-Media Thickness (IMT) Measurement Program (option)
- Automatic measurements (patent pending) of carotid artery Intima-Media Thickness (IMT) on any acquired frame
- On-board IMT package provides non-interrupted workflow – fully integrated with M&A, worksheet, archiving and reporting functions
- Robust algorithm provides quick, reliable measurements which can be stored to the on-board archive for review and reporting
- IMT measurement can be made from frozen images or images retrieved from archive
- IMT package supports measurements of different regions of the intima in the carotid vessel (e.g., Lt./Rt./CCA/ICA etc.)
- Frame for IMT measurement can be selected in relation to the ECG waveform
- IMT protocol allows to pre-define the size and location of the IMT ROI relative to some vertical marker (bulb), to support consistent results

User Interface
- Ergonomic Flex Fit design with left/right swivel and up/down arm-mobility of keyboard and monitor permitting both physiological sitting or standing operation
- Easy-to-learn user interface with intelligent keyboard
- Keyboard with application-specific assignable rotaries and push buttons for primary controls
- Interactive back-lighting of application-specific push buttons
- Full-size, alphanumeric keyboard with adjustable backlighting
- Application-specific secondary controls available through slide bars operated by a four-way rocker
- Slide pot TGC curve with six pots
- Dedicated rotary for overall gain for 2D-mode
- Dedicated rotary for M-mode, CFM or Doppler controlled by active mode
- Digital harvesting of images and loops into image clipboard
- Patient browser screen for registration of demographic data and quick review of image clipboard contents
• Fully programmable user presets for probe/application default settings
• Support for international keyboard characters in 12 languages
• Integrated speakers
• Probe and gel holders on both sides of keyboard
• Three user-programmable FLEX keys for easy access to an often-used function in global and on application level

**Wideband Probes**

• Electronic selection between four solid-state and one standalone Doppler probe connectors
• Three probe-sockets are RS type – one socket is LOGIQ type to support TEE probes with LOGIQ connectors only

### Wideband Probes

<table>
<thead>
<tr>
<th>PROBE</th>
<th>FREQUENCY RANGE</th>
<th>CATALOG #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phased Array Sector Probes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M4S-RS</td>
<td>1.5 – 3.6 MHz</td>
<td>H40452LH</td>
</tr>
<tr>
<td>5S-RS</td>
<td>2.0 – 5.0 MHz</td>
<td>H4000PC</td>
</tr>
<tr>
<td>6S-RS</td>
<td>2.7 – 8.0 MHz</td>
<td>H45021RP</td>
</tr>
<tr>
<td>7S-RS</td>
<td>3.5 – 8.0 MHz</td>
<td>H4000PE</td>
</tr>
<tr>
<td>10S-RS</td>
<td>4.5 – 11.5 MHz</td>
<td>H4000PF</td>
</tr>
<tr>
<td>Linear Array Probes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8L-RS</td>
<td>4.0 – 13.0 MHz</td>
<td>H40402LT</td>
</tr>
<tr>
<td>9L-RS</td>
<td>3.5 – 10.0 MHz</td>
<td>H40442LL</td>
</tr>
<tr>
<td>12L-RS</td>
<td>6.0 – 13.0 MHz</td>
<td>H40402LY</td>
</tr>
<tr>
<td>Convex Array (Curved) Probes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4C-RS</td>
<td>1.8 – 6.0 MHz</td>
<td>H4000SR</td>
</tr>
<tr>
<td>8C-RS</td>
<td>4.0 – 11.0 MHz</td>
<td>H40402LS</td>
</tr>
<tr>
<td>Convex Array Transvaginal Probe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e8C-RS</td>
<td>4.0 – 11.0 MHz</td>
<td>H40402LN</td>
</tr>
<tr>
<td>Intra-Operative Probes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i12L-RS</td>
<td>5.0 – 13.0 MHz</td>
<td>H40402LW</td>
</tr>
<tr>
<td>Doppler Pencil Probes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2D(P2D)</td>
<td>2.0 MHz</td>
<td>H4830JE</td>
</tr>
<tr>
<td>6D(P6D)</td>
<td>6.0 MHz</td>
<td>H4830JG</td>
</tr>
<tr>
<td>Multi-Plane Transesophageal Phased Array Probes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6Tc-RS</td>
<td>2.9 – 8.0 MHz</td>
<td>H45551ZE</td>
</tr>
<tr>
<td>9T-RS</td>
<td>4.0 – 10.0 MHz</td>
<td>H45531YM</td>
</tr>
<tr>
<td>6Tc</td>
<td>2.9 – 8.0 MHz</td>
<td>H4551ZD</td>
</tr>
<tr>
<td>9T</td>
<td>4.0 – 10.0 MHz</td>
<td>H45521DY</td>
</tr>
</tbody>
</table>

**Biopsy Bracket Support (option)**

• On-screen biopsy Guide-Line, Guide-Zone and depth measure for “Civco” multi-angle biopsy bracket, supporting probe models
• M4S-RS
• 4C-RS
• 8L-RS
• 9L-RS
• 12L-RS
• e8C-RS

**Supported Applications (probe dependent)**

• Cardiac (adults, pediatrics and fetal heart)
• Vascular
• Pediatric
• Neonatal cephalic
• Transcranial (adult cephalic)
• Abdominal
• Gynecological
• Obstetrical
• Musculoskeletal including Superficial
• Small Parts
• Breast
• Nerve Imaging
• Coronary

**Advanced Options**

**Contrast Imaging***

• All contrast agents should be used as described on the label by the contrast agent manufacturers

**LVO Contrast (option)**

• LV Contrast ([on M4S-RS, 5S-RS, 6Tc, and 6T-RS or 6Tc-RS probes]) enhances delineation of the LV border in combination with ultrasound contrast agents. The new implementation of GE’s Coded Phase Inversion (CPI) provides high-resolution detection of contrast in the LV cavity and excellent suppression of myocardial tissue signals

* Harmonic imaging for supporting contrast agent imaging was developed by Schering.*
LOGIQView (option)

- LOGIQView: provides the ability to construct and view a static 2D image with wider field-of-view of a linear array transducer – this allows viewing and measurements of anatomy that is larger than what would fit in a single image.

Image Management and Archiving

- Built-in patient archive with images/loops, patient information, examination information and texts, measurements and report.
- Raw data workflow with instant data management.
- Data are either stored internally or to a remote archive (EchoPAC or Image Vault server).
- Raw data allows changes to gain, baseline, color maps, sweep speeds, etc. for recalled images and loops.
- DICOM 3.0 Image Format: DICOM incorporates raw image data information with all its data management flexibility into the image communication standard DICOM.
- Images can be directly stored or exported in DICOM format to a DICOM server (PACS) (option – see DICOM Network Connectivity).
- Image clipboard for stamp-sized preview images to allow recalling images or loops of choice directly.
- 2D, CFM and TVI data at maximum frame rate may be reviewed by scrolling or by running cine loops.
- Internal archive data can be exported to removable image storage through DVD/CD-RW, USB flash card (option), External Hard-disk (option), Magnet-Optical Disk (option) in Raw-Data and DICOM format.
- Internal hard disk: for storing programs, application settings, ultrasound images and patient archive.
- Over 120 Gbyte disk space for exam archive storage.
- Configurable HTML-based report function.
- Report template designer package.
- Raw-Data, DICOM, AVI, MPEG and JPEG export.
- Built-in DVD writer (supports CD-R and DVD-R).

Self-contained DICOM Viewer

- Exams can be exported to CD/DVD or USB media with an integrated “EZ DICOM CD viewer™”.
- Self-contained “EZ DICOM CD viewer™” allows review of exams from media on a standard PC.

Excel Export

- Allows export of all archived measurement and textual patient information in standard Microsoft Excel® files.

EchoPAC Connectivity

- Connectivity and image analysis capability of Vivid S6 from EchoPAC PC.
- EchoPAC PC allows instant access to ultrasound raw data provided by the system.
- Comprehensive review, analysis and post-processing capabilities on EchoPAC PC.
- Advanced quantitative analysis and post-processing capabilities.
- Q-Analysis on raw data from Vivid S6 on EchoPAC PC.
- Three user levels help organizing data security requirements.

DICOM Media Support

- DICOM media: read/write images on DICOM format.

DICOM Network Connectivity (option)

Provides communication to a DICOM server and DICOM printer. Includes:
- Ethernet network connection.
- Verification AE.
- Image export AE (network storage).
- Modality worklist AE.
- Storage commitment.
- Performed procedure step.
- Storage to DICOM server.
- DICOM structured report SCU for cardiac and vascular.
- Verify: provides verification of an active connection between the scanner and another DICOM device.
- DICOM print.
- Support of two patient ID fields in DICOM.

DICOM Modality Worklist (option)

- Modality worklist: gives access to a list of patients provided by a worklist server.

DICOM Print (option)

- Allows printing images via a DICOM printer.
Database Importation from Vivid™ 3 and Vivid™ 4 Systems (option)
- Provides a one-time database import capability from a Vivid 3 or a Vivid 4 system
- Allows user to review previous exams generated on a Vivid 3 or a Vivid 4 system in DICOM format
- Allows to add examinations to patients already existing in the imported database

Virtual Printer (option)
- Provides the ability to send “Print” commands to any of two printers even when not connected to a printer – upon re-connection of printer, the system automatically produces hard copies from print images saved in chronological succession on disk

MPEGvue (option)
- Using MPEGvue, exams may be stored onto removable media or on remote networked shared drive together with integrated MPEGvue player for viewing on standard PC
- Smart email feature allows transparent transmission of images from a separate PC via email using resident Outlook email client
- Patient management utility on the receiving standard PC provides ability to organize the exams on different sub-directories on the user’s hard disk

eVue (option)
- Allows interactive viewing of images, loops or full exams from remote location on any PC, using LAN or wireless LAN

Insite™ Express Connection (ExC) Enables Remote Service and Training*
- Easy, Flexible and Secure connectivity configuration
- The “Contact GE” on-screen button directly generates a real-time service request to the GE online engineering or application specialist. It takes a snapshot of the system at the time of the service request to enable analysis of problem before customer contact.
- Virtual Console Observation (VCO) enables the customer to allow desktop screens to be viewed and controlled remotely over the encrypted tunnel to enable real-time training, device configuration and clinical application support.

Peripherals (options)
- USB black and white video printer with control from system panel
- USB color video printer with control from system panel
- USB inkjet printer, supporting ink-saving mode
- External MOD 5.25” drive
- USB flash drive for exam export
- USB flash memory card
- USB wireless network interface accessories
- External USB Hard Disk USB2.0 RAID 1 mirrors the contents of one hard disk onto another – effective size: 1TB

Accessories (options)
- Interface cable for External ECG
- ECG adapter for DIN-type pediatrics electrode leads
- Three-pedal foot switch with programmable functionality
- Rear and folder boxes
- Disposable hygienic covers for the operator panel

Console
- Probe and gel holder
- Hand rest and handles
- Four swivel wheels – front wheel brakes
- Rear wheels direction lock

Inputs and Outputs
- DVI/VGA video output
- Audio out
- Four USB-2 connectors – two at rear and two at front to support video printers, MOD, flash memory cards
- LAN Ethernet

* Operation of Insite™ Express Connection is dependent on the infrastructure being available. Check with your local GE service representative.
Dimensions and Weight

- Depth: 70 cm/27.6” (approx.)
- Width: 55 cm/21.7”
- Height: 123 cm/48.4” to 143 cm/56.3”
- Minimum height with folded screen: 95 cm/37.4”
- Weight: <70 kg/154 lbs

Electrical Power

- Mains-line operation
- Input rating: 100-120/230 VAC
- Power: 500 VA
- Frequency: 50/60 Hz
- Two isolated AC outlets

Safety Conformance

Built to meet the requirements of:

- EN / IEC / UL 60601-1 / CSA 22.1 601-1, Class I,
  Type B with BF or CF Applied Parts
- EN / IEC60601-1-1
- EN / IEC 60601-1-2, Class B
- EN / IEC 60601-2-37
- NEMA UD-2, UD-3

Virus Protection

To minimize virus vulnerability, Vivid S6 is configured with a minimal set of open ports and with all network services not actively used by the system closed down. This significantly reduces the risk of a virus attack on the Vivid S6.

GE is continuously judging the need for additional actions to reduce vulnerability of equipment. This includes vulnerability scanning of our products and evaluation of new security patches for the third-party technology used. Microsoft and other security patches that address serious issues with Vivid S6 will be made available to customers after GE verification of those patches.
Healthcare Re-imagined

GE is dedicated to helping you transform healthcare delivery by driving critical breakthroughs in biology and technology. Our expertise in medical imaging and information technologies, medical diagnostics, patient monitoring systems, drug discovery, and biopharmaceutical manufacturing technologies is enabling healthcare professionals around the world to discover new ways to predict, diagnose and treat disease earlier. We call this model of care “Early Health.” The goal: to help clinicians detect disease earlier, access more information and intervene earlier with more targeted treatments, so they can help their patients live their lives to the fullest. Re-think, Re-discover, Re-invent, Re-imagine.

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