Ultrasound System Specifications
The superb imaging and performance capabilities of ESE-G60 give you the confidence and efficiencies in your daily exam:
• World class image quality with unmatched high-frequency range
• Versatile features and functions for general imaging
• RF platform and Xcen technology wideband probes
• Single touch automation function for easy optimization

System Overview

Architecture
• The revolutionary RF platform, The First In The World, allows for more accurate information. This platform transfers all RF data for computing without any information loss. It has a much better advantage in detail imaging than current advanced platforms
• Thanks to the RF platform, it allows the development of many RF-based processing algorithms, which have ultra-premium contrast and resolution imaging
• This unique platform is capable of processing multiple data streams simultaneously
• Up to 25MHz next generation digital broadband and high resolution acoustic beamforming
• The new 12 bit, low noise, digital circuitry, with up to 230db dynamic range has improved 2D performance and increased Doppler sensitivity
• Directional-enhanced information compiling for more tissue detail and reduction of angle-generated artifacts
• Next generation adaptive image processing for noise and artifact reduction that improves tissue presentation and edge definition
• Fully independent, triplex multiple mode operation for easy in Doppler procedures
• Multi-processors allow simultaneous mode changes and support for advanced system functionality

Applications
• Abdomen
• Obstetric
• Gynecology
• Cardiology
• Urology
• Vascular
• TCD
• Small Parts
• Pediatrics
• Intra-operative
## Imaging features

<table>
<thead>
<tr>
<th>Features</th>
<th>Description</th>
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<tbody>
<tr>
<td>2D grayscale imaging</td>
<td></td>
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<tr>
<td>Harmonic imaging both in tissue harmonic and pulse inversion harmonic technologies</td>
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<tr>
<td>Vfusion, RF-based directional-enhanced information compounding</td>
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<tr>
<td>VSpeckle, specialized and adaptive imaging processing to remove speckle noise artifacts and enhance tissue edge for clarity and accuracy</td>
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<tr>
<td>VTissue, the advanced adaptive image processing to compensate for sound and speed variation in different tissue*</td>
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<td>Auto imaging optimization</td>
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<td>Easy Comparative Function to compare previous exam</td>
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<tr>
<td>Tissue M-mode</td>
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<tr>
<td>Color M-mode(optional)</td>
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<tr>
<td>Color Doppler imaging</td>
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<tr>
<td>Power Doppler imaging</td>
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<tr>
<td>Pulse wave Doppler imaging</td>
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<tr>
<td>Simultaneous 2D and M mode</td>
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<tr>
<td>Duplex 2D/PW Doppler</td>
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<tr>
<td>Triplex 2D/Color/PW Doppler</td>
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<tr>
<td>High PRF pulsed wave Doppler</td>
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<td>Continuous wave Doppler</td>
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<td>RF-based Zoom</td>
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<td>FULL screen imaging to enlarge imaging size</td>
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<td>Dual real time imaging without compromising imaging size</td>
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<tr>
<td>Multi Angle M-mode with 360 degree rotation (Optional)</td>
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<tr>
<td>PVview for panoramic imaging (Optional)</td>
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<tr>
<td>TVView for trapezoidal imaging</td>
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<tr>
<td>Elastography imaging(Optional)</td>
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<td>Contrast imaging(Optional)</td>
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<tr>
<td>3D imaging</td>
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<tr>
<td>3D/4D HQR (High Quality rendering) (Optional)*</td>
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<td>Spatio_Temporal Image Correlation (STIC) (Optional)*</td>
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<td>VOCAL (Volume calculation, Follicle count) (Optional)*</td>
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<tr>
<td>SRV (Super Resolution Volume) to have extreme contrast and resolution in thin volume</td>
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<td>Tomographic display (MCUT)</td>
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<tr>
<td>Inversion mode</td>
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<tr>
<td>Magic Cut</td>
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<tr>
<td>Smart Touch 3D/4D operation(Optional)</td>
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<td>Free View(Optional)</td>
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<tr>
<td>Auto NT* (Optional)</td>
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<tr>
<td>Real-time grayscale 4D</td>
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<tr>
<td>Three leads ECG function (Optional)</td>
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<tr>
<td>Tissue Doppler (TD) mode*</td>
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<tr>
<td>Tissue Velocity Imaging (TVI) mode* (Optional)</td>
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<tr>
<td>Tissue Velocity M (TVM) mode (optional)*</td>
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<tr>
<td>Tissue Velocity M (TVM) mode*</td>
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<tr>
<td>Integrated smart stress echo mode (Optional)</td>
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<tr>
<td>Auto IMT function*</td>
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## Standard features

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<tr>
<th>Features</th>
<th>Description</th>
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<tr>
<td>Up to 25Mhz high frequency in system platform. Up to 18MHZ’s probes are supported</td>
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<tr>
<td>RF platform and RF data processing</td>
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<tr>
<td>Up to 1500 seconds standard cine storage</td>
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<tr>
<td>500GB hard drive</td>
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<tr>
<td>SSD for quick boot up (Optional)</td>
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<tr>
<td>Integrated D2VDRW</td>
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<tr>
<td>Integrated black/white thermal video printer slot</td>
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<tr>
<td>Patient information database</td>
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<td>Image archive on hard drive</td>
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<td>Quick store to USB memory stick</td>
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<tr>
<td>Quick store to hard drive</td>
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<tr>
<td>Quick print to B/W and color thermal video printer</td>
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<td>Network storage and printing</td>
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<tr>
<td>Full measurement and analysis package</td>
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<td>Real time auto wave Doppler track and calculations</td>
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<tr>
<td>Vascular calculations</td>
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<td>Cardiac calculations</td>
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<td>OB calculations and tables</td>
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<td>Gynecological calculations</td>
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<td>Urological calculations</td>
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<td>Renal calculations</td>
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<td>Volume calculations</td>
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<tr>
<td>Barcode reader for patient information input</td>
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<tr>
<td>Wireless networking for easy data sharing, storage and printing (optional)</td>
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<tr>
<td>Bluetooth for image data transfer</td>
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<tr>
<td>Image data transfer directly by E-Mail with network access</td>
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<tr>
<td>Up-to-date connectivity and data management solutions, wireless (optional), LAN, Bluetooth, E-Mail, integrated database</td>
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<tr>
<td>DICOM compatibility*</td>
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<tr>
<td>Four active probe ports, plus one dummy probe port</td>
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<td>5 USB ports</td>
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<tr>
<td>8 TGC slides</td>
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<td>Average 4 multiple adjustable frequency in every probe and mode</td>
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<td>Up to 512 line density</td>
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<tr>
<td>1 DVI-D interface</td>
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<td>1 Audio in interface; 1 Audio out interface</td>
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<tr>
<td>1 Speaker interface</td>
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<td>1 RJ45 interface</td>
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## Ergonomics

<table>
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<th>Features</th>
<th>Description</th>
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<tr>
<td>Unique human oriented design for comfort and convenience</td>
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<tr>
<td>Fully articulating 21.5-inch high resolution flat panel display with nearly infinite positioning adjustments</td>
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<td>Up to 250mm up/down operation panel, controlled by electric motor</td>
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<td>Fully articulating control panel including height, swivel and front-back slide adjustment</td>
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<td>Integrated footrest</td>
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<td>Integrated foot switch for configurable function, such as Freeze, store etc</td>
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<td>Easy access DVD media drive</td>
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<tr>
<td>5 easy access transducer ports</td>
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<td>5 transducer holders (removable for easy cleaning)</td>
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<td>Automatic warming gel bottle holders</td>
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<tr>
<td>Integrated touchable alphabetic keyboard</td>
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<tr>
<td>Simple, easy and effective cable management structure</td>
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</tbody>
</table>
### Keyboard
- Highly sensitive 13 inch capacity touch panel
- Intuitive, configurable and touchable interactive operation interface
- Ergonomic hard keys for general ultrasound operations
- 8 TGC slides, functionality at any depth
- Backlight keys

### Image display screen
- 21.5 inch high resolution IPS, LED technology, pixel resolution: 1920x1080
- Brightness, contrast and color temperature adjustment
- Adjustable Gamma curve optimization for dedicated applications
- Big angel swivel and tilting capability

### Peripherals
- B&W thermal video printer: Sony UP-D897MD (optional)
- Color thermal video printer: Sony UP-D25MD (optional)
- Memory stick (optional)

### Dimensions and Weight
- Height: 1320-1570mm
- Width: 605mm
- Depth: 900-1050mm
- Weight: 75kg

### Electrical Power
- Voltage: 100-240V AC
- Frequency: 50/60Hz
- Power: Max. 600VA for console only

### Transducers

#### Transducer Technology
- Xcen technology for wideband frequency
- Pure wave technology for high resolution imaging
- Unique and high technical Xcen probe connector to adapt all different type of product models

#### Transducer types
- Convex array
- Linear array
- Phase array
- 4D probe
- Endocavity probe
- Micro-convex array

#### Transducer selection
- Electronic switching of transducers
- User customizable imaging presets for each transducer and application
- Automatic dynamic receiving focus in all transducers
- Multiple adjustable transmit focal zone, up to 8 focal zone

#### G2-5C Broadband Curved Array
- Field of view: 66 degree
- Convex radius: 50mm
- Application: abdomen, OB/Gyn, urology, pediatric
- Frequency range: 1.4 - 5.6MHz
- Pulsed wave Doppler, color Doppler, power Doppler, harmonic
- Multi-imaging frequency setting in 2D, Harmonic, color Doppler and Wave Doppler modes
- Reusable biopsy guide available
<table>
<thead>
<tr>
<th>Array Type</th>
<th>Description</th>
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</table>
| **F2-5C Broadband Curved Array** | - Field of view: 59 degree  
- Convex radius: 59.5mm  
- Application: abdomen, OB/Gyn, urology, pediatric  
- Frequency range: 1.6 - 5.5MHz  
- Pulsed wave Doppler, color Doppler, power Doppler, harmonic  
- Multi-imaging frequency setting in 2D, Harmonic, color Doppler and Wave Doppler modes  
- Reusable biopsy guide available |
| **D3-6C broadband curved array volume probe** | - Field of view: 78 degree  
- Convex radius: 40mm  
- Application: abdomen, OB/Gyn, urology  
- Frequency range: 1.9 - 7MHz  
- Pulsed wave Doppler, color Doppler, power Doppler, harmonic, 3D/4D grayscale  
- Multi-imaging frequency setting in 2D, Harmonic, color Doppler and Wave Doppler modes |
| **G4-9M broadband micro convex array** | - Field of view: 138 degree  
- Convex radius: 12mm  
- Application: pediatric, abdomen, cardiac  
- Frequency range: 3 - 10MHz  
- Pulsed wave Doppler, color Doppler, power Doppler, harmonic  
- Multi-imaging frequency setting in 2D, Harmonic, color Doppler and Wave Doppler modes |
| **G4-9E broadband micro convex endocavity array** | - Field of view: 138 degree  
- Convex radius: 12mm  
- Application: Ob/Gyn, urology  
- Frequency range: 3 - 10MHz  
- Pulsed wave Doppler, color Doppler, power Doppler, harmonic  
- Multi-imaging frequency setting in 2D, Harmonic, color Doppler and Wave Doppler modes  
- Reusable biopsy guide available |
| **D4-9E broadband micro convex 4D endocavity array** | - Field of view: 125 degree  
- Convex radius: 10mm  
- Application: Ob/Gyn, urology  
- Frequency range: 3 - 10MHz  
- Pulsed wave Doppler, color Doppler, power Doppler, harmonic, 3D/4D grayscale  
- Multi-imaging frequency setting in 2D, 3D/4D, Harmonic, color Doppler and Wave Doppler modes |
| **X4-12L broadband linear array** | - Fine pitch, high resolution  
- Applications: vascular, small parts  
- Frequency range: 4.5 - 13MHz  
- Pulsed wave Doppler, color Doppler, power Doppler, harmonic  
- Multi-imaging frequency setting in 2D, Harmonic, color Doppler and Wave Doppler modes |
| **X6-16L broadband linear array** | - Fine pitch, high resolution  
- Applications: vascular, small parts  
- Frequency range: 6.5 - 18MHz  
- Pulsed wave Doppler, color Doppler, power Doppler, harmonic  
- Multi-imaging frequency setting in 2D, Harmonic, color Doppler and Wave Doppler modes |
| **I4-11T broadband linear array** | - Fine pitch, high resolution  
- Frequency range: 4.2 - 11MHz  
- Pulsed wave Doppler, color Doppler, power Doppler, harmonic  
- Multi-imaging frequency setting in 2D, Harmonic, color Doppler and Wave Doppler modes |
### G1-4P phased array
- **Applications:** cardiac, abdomen, Ob/Gyn, Urology
- **Frequency range:** 1.35-4.3Mhz
- **Pulsed wave Doppler, continuous wave Doppler, color Doppler, power Doppler, harmonic**
- **Multi-imaging frequency setting in 2D, Harmonic, color Doppler and Wave Doppler modes**

### S1-6P phased array
- **Single Crystal technology**
- **Applications:** cardiac, abdomen, Ob/Gyn, Urology
- **Frequency range:** 1.9-7Mhz
- **Pulsed wave Doppler, continuous wave Doppler, color Doppler, power Doppler, harmonic**
- **Multi-imaging frequency setting in 2D, Harmonic, color Doppler and Wave Doppler modes**

### U5-15LE broadband linear array
- **Fine pitch, high resolution**
- **Applications:** small parts, specially for breast, vascular
- **Footprint:** 52mm
- **Frequency range:** 5 -15Mhz
- **Pulsed wave Doppler, color Doppler, power Doppler, harmonic**
- **Multi-imaging frequency setting in 2D, Harmonic, color Doppler and Wave Doppler modes**

### Advanced Imaging controls

#### VFusion
- Available on all transducers and for 2D, 3D/4D (except phase array probe)
- Up to 5 levels of directional imaging fusion to enrich information
- Operate in conjunction with VSpeckle, harmonic imaging

#### VSpeckle
- Available on all transducers and for 2D, 3D/4D
- Virtually eliminate speckle noise artifact and dynamically enhances tissue margins
- Selectable multiple levels of speckle noise reduction and smoothing
- Operates in conjunction with VFusion and harmonic imaging

#### VTissue *
- Advanced imaging processing to adapt to the speed of the ultrasound variation in different tissue
- Improved detail resolution and conspicuity of lesions
- Presentable sound and speed in different applications
- One touch operation to ease diagnosis

#### SRV (Super Resolution Volume)
- Extreme contrast and spatial resolution in thin volume
- Small volume sweep angle
- High volume rate
- Visual able the tissue information in a thick slice
- Better detection in diffuse lesions of organs

#### 3D/4D HQR (High Quality Rendering) (Optional)
- Amazing high image quality
- Extreme realistic rendering images
- Similar operation as normal rendering

#### VOCAL (Volume Calculation) (Optional)
- Automatic 3D follicle detection (number&size)
- Definition of a shell contour
- Volume calculation of ultrasound tissue inside a shell contour
**Spatio-Temporal Image Correlation (STIC) (Optional)**
- Visualize the fetal heart or an artery
- One complete heart cycle represented
- Using 3D static acquisition

**Inversion mode**
- This render mode is used to display anechoic structures such as vessels
- It inverts the gray values of the rendered image, such as black image information become white and vice versa

**Magic Cut**
- Ability to edit images, make possible to cut away structure obstructing the view in the ROI
- Several cutting methods available

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**Advanced Imaging controls (cont.)**

**Smart Touch 3D/4D Operation (Optional)**
- Fully utilize touch panel possibility for easy operation, such as rotation 3D rendering image, move ROI, create line by finger

**Free View (Optional)**
- Provide any plane view to visualize the internal tissue information
- Improve the contrast resolution to facilitate the detection of diffuse lesions in organs

**Stress Echo (Optional)**
- Review and analyze wall segment information
- Continuous capture or selectable capture
- Provides selectable protocol template for exercise

**Auto NT (Nuchal Translucency) measurement**
- Automatically detect Nuchal Translucency in interest box
- Automatically report thickness result of NT

**Auto IMT (Intima-Media Thickness) measurement**
- Automatically detect intima media thickness in interest box
- Automatically report the result of IMT
- Available in linear probe

**Next generation RF-based image processing**
- Available on all imaging transducers in 2D grayscale modes
- Virtually eliminates speckle noise artifact and dynamically enhance tissue edge
- Operates with other real-time processing algorithms
## Imaging modes

### 2D Imaging
- Pre-defined ATGC (adaptive temporal gain compensation) curves optimized for consistently excellent imaging
- B/M acoustic output: 0-100%
- Depth: able to adjust from 1 to 36cm
- Select between 1 to 8 transmit focal zones
- Reverse function: on/off
- VFusion function
- VSpeckle function
- Harmonic imaging both tissue harmonic and phase inversion
- Cineloop image review
- Selectable 2D line density
- Dual imaging with independent cineloop
- 256(8 bit) gray level
- Up to 8 focus zone adjustable
- Multiple color maps with chroma imaging
- FULL screen imaging to larger image size
- Multi frequency: probe dependent
- Gray filter: 6 steps
- Persistence: 8 steps
- Selectable image angles, probe dependent
- Gain: 0-100%
- Dynamic range: 30-230 db
- VSharpen to enhance edge contrast
- Smooth to improve spatial resolution
- EdgeEnhance to improve detail information and contrast
- VNear to enhance SNR of near field

### Harmonic Imaging
- Supports both tissue harmonic and phase inversion imaging (transducer and frequency dependence)
- Second harmonic processing to reduce artifacts and improve image clarity
- Maximize detail resolution and enhance contrast
- Available on all imaging transducers
- Extends high performance imaging capabilities to all patient body types

### M mode
- Selectable sweeping rates
- Time marks: 0.025 – 0.5 second
- Selectable display format prospective or retrospective (1/3-2/3, 1/2-1/2, 2/3-1/3, side by side 1/2-1/2, side by side 1/3-2/3, full screen)
- Chroma colorization with multiple color maps
- Cineloop review for retrospective analysis of M-mode data
- 256 gray levels

### Color Doppler mode
- Available on all imaging transducers
- Automatically adapts transmit and receive bandwidth processing based on the color box position
- Cineloop review with full playback control
- Steering on linear array transducers
- Color flow M mode display for tissue motion and flow velocity(optional)
- Selectable in baseline, line density, flash reduction, persistence, maps, frequency, PRF, wall filter, packet size, color level, sensitivity, focus position, acoustic power, and smooth
- Color gain
- Region of interest
- Baseline invert
- Simultaneous mode during PW mode
- Smoothing
- Wall filter
- Zoom

### Power Doppler mode
- High sensitive mode for small vessel visualization
- Available on all transducers
- Cineloop review
- Multiple color maps
- Individual controls for gain
- Selectable baseline, line density, flash reduction, persistence, maps, frequency, PRF, wall filter, packet size, color level, sensitivity, focus position, acoustic power, and smooth
- Adjustable region of interest
### Pulsed Wave (PW) Doppler
- Ultra high resolution spectral FFT rate
- Angle correction with automatic velocity scale adjustment
- Normal, invert display around horizontal zero line
- Selectable gray filter, dynamic range, frequency, PRF, wall filter, baseline, angle correct, sample volume
- Selectable sweep speeds: 8 steps
- Maximum velocity range: 12m/s
- PW acoustic output: 0-100%
- Selectable low frequency signal filtering with adjustable wall filter settings
- Selectable grayscale curve for optimal display
- Selectable chroma colorization maps
- Selectable display format prospective or retrospective (1/3-2/3, 1/2-1/2, 2/3-1/3, side by side 1/2-1/2, side by side 1/3-2/3, full screen)
- Auto function to optimize spectral Doppler display
- Digitally enhanced stereo output
- 256 gray levels
- Post-processing in frozen mode includes map, baseline, invert and chroma
- Simultaneous or duplex mode of operation
- Simultaneous 2D, color Doppler, pulsed Doppler
- High PRF capability in all modes including duplex and triplex

### Continuous Wave Doppler (CWD)
- Cardiac sector array transducer only
- Maximum velocity range: 19m/sec
- User can measure distance and area
- Measurement can be made on individual frames during cineloop review
- Available on linear transducers

### Elastography imaging (Optional)
- Shows the spatial distribution of tissue elasticity properties in a region of interest to estimate the strain before and after tissue distortion caused by external force
- The strain estimation is scaled by color to have smooth distribution display
- Have quality index to indicate if there is proper external force

### Contrast imaging (Optional)
- Support contrast imaging in both 2D and 3D volume
- By contrast agent, imaging is enhanced within vessel which agent flow
- Have one button push to destroy the agent. Useful in the bubble wash-in characteristics of anatomy being scanned

### 3D/4D
- 3D/4D rotation
- Grayscale imaging controls
- Selectable rendering approaches
- Unique high quality rendering algorithm
- Selectable gray maps
- Multi slide cutting
- Cineloop 3D (MCUT)
- Review volume

### PView (Optional)
- Real time extended field of view composite imaging
- Ability to back up and realign the image during acquisition
- Full zoom, cineloop review and image rotation capabilities

### TView
- Expand view of scanning
- Available on linear transducers

### Auto
- Intelligent one button automatic optimization in 2D and Doppler modes
- Automatically adjust PRF and baseline in Doppler

### Stress Echo (Optional)*
- Acquisition of single-frames or full-motion digital clips in any modes (including 2D, color flow, power Doppler, etc)
- Length of acquired images is user-adjustable
- Default stress protocols
- Flexible user defined stress protocols

### Tissue Doppler Imaging (TD) *
- Present wall motion spectrum by using Doppler principle
- Provide wall motion direction and velocity information
- Available on all sector transducer for cardiac imaging
- Gain
### Tissue Velocity Imaging (TVI)
- Color codes the velocities in tissue.
- Present tissue color imaging by using Doppler principle.
- This color image is overlaid onto the 2D image.
- Captures low flow but high amplitude signals associated with wall motion.
- Available on all sector transducer for cardiac imaging.
- Tissue velocity M mode display for wall motion (optional).
- Gain
- Velocity

### Touch Panel Interface

#### 2D mode
| Option          | Map       | Focus width  | Template | Acoustic power | Contrast imaging | Elastosonography | EdgeEnhance | Vnear | NeedleEnhance | SGC
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<tbody>
<tr>
<td>New patient</td>
<td>L/R</td>
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<td>Comments</td>
<td>VTissue*</td>
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<td>End exam</td>
<td>VSpeckle</td>
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#### M Mode

| Option          | Map       | Focus width  | Template | Acoustic power | Contrast imaging | Elastosonography | EdgeEnhance | Vnear | NeedleEnhance | SGC
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#### CF mode

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#### PW/CW mode

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#### 3D mode

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*VTissue* is optional.
### 4D mode

- Comments
- Body Pattern
- Back to 2D
- Start 4D
- Auto Cine
- Movement step
- Rotation direction

- Render
- Display format
- Image reference
- View
- Gray map
- VSpeckle

- Quality
- Threshold
- Transparency
- Volume angle
- Slice position (after data acquisition)

- 3DMcut (after data acquisition)
- Smart touch 3D/4D operation (after data acquisition)

### System Feature

#### Display modes

- Simultaneous capability
- 2D/PW/CW
- 2D/CF or PDI
- 2D/M
- Dual, 2D/2D
- Dual, 2D/2D+CF or PDI
- Dual, duplex and triplax

- Duplex and Triplex mode
- Quad display in 3D/4D application
- 9 slice images display in 3D/4D application
- Time line display
- Independent dual 2D/PW or CW
- Timed based sweep update mode

#### Display annotation

- Institution/hospital name
- Date: 2 types selectable, YY/MM/DD, MM/DD/YY
- Time: 2 types selectable, 24 hours and 12 hours
- Operator identification
- Patient name, first, last
- Patient identification: 30 characters
- Gestational age from LMP/EDC/GA/BBT
- Power output index
- MI: mechanical index
- TIS: thermal index soft tissue
- TIC: thermal index cranial (Bone)
- TIB: thermal index bone
- Probe orientation marker: coincide with a probe orientation marking on the probe
- Gray/color bar
- Measurement result window
- Probe type
- Application name
- Image depth

- Imaging parameters by mode
- 2D/M mode: acoustic power output, gain, frequency, frame rate, dynamic range
- Color mode: color acoustic power output, color gain, color flow frequency, PRF, wall filter
- PW/CW mode: Doppler acoustic power output, Doppler gain, Doppler frequency, PRF, wall filter, sample depth
- Scanline Gain Compensation (SGC) with 6 slides adjustment
- Focus zone marker
- Body pattern
- PW and CW scale markers: time/speed
- M scale markers: time/depth, time
- System measurement display
- System message display
- Biopsy guide line
- Heart rate

#### Simple User Operation Interface

- Simple user interface and easy workflow, allows one step on probe & application switch, and intuitive user parameter control

#### CineLoop

- Acquisition, storage in memory and display of up to 15000 frames, 1500 seconds long of 2D, color and PW/CW images for review
- Acquisition, storage and replay of Doppler audio

#### Compare

- Flexibly compare live imaging with stored imaging by one key

#### Quick save feature

- The system provides quick save function through USB stick, internal/external HDD, DVD during or after exam
- Configurable saving file format, VRD (Raw Data), DICOM, PNG and AVI
### Physio (Optional)
- One 3-lead ECG input
- Gain, sweep rate and display position controls
- Automatic heart rate calculation and display
- Fault condition display

### Archive
- Patient data input which include patient ID, name, nationality, birth date, sex, exam physician, quality check, exam operator
- Physical data such as weight, height
- Patient exam management
- Patient exam images storage and management
- Import VRD format data into the system from outside media, such as USB stick, external HDD, DVD
- Export patient data into outside medias

### Report
- Automatically pull patient data into the report
- Automatically load measurement worksheet into the report
- Pull related exams’ images into the report
- Write comments in the report
- Print report through network or local printer

### Connectivity
- Standard connectivity features
- Local print to on-board or off-board video printers through USB port
- Page report print
- Image export to removable media (DVD, external HDD, USB stick)
- Network linkage
- Image export to network storage servers*
- DICOM export and retrieve *
- Integrated DVDRW
- Support standard DVD media
- Data storage formats include VRD, DICOM, PNG, AVI
- VRD and DICOM images stored in disc can be recalled on the system
- PNG and AVI images can be played on normal computers
- On-board patient exam storage
- Direct digital storage of static image or cineloop images to internal hard disk drives
- Fully integrated user interface

### Probes/application
- Selectable multiple applications
- Edit exist application preset
- Edit user defined preset
- Rename preset
- Return to factory preset
- Quick save user defined parameters in related application

### Safety Conformance
- Regulatory Notice: This device is tested to meet all applicable requirements in relevant. According to 93/42 EEC, it is class IIA medical device.
- Conformity to Standards:
  - IEC 60601-1 E3:2005 Medical electrical equipment - Part 1: General requirements for basic safety and essential performance
  - IEC 60601-1-1:2000 Safety requirements for medical electrical systems
  - IEC 60601-1-2:2007 Electromagnetic compatibility - Requirements and tests
  - IEC 60601-1-4:2000 Programmable electrical medical Systems
  - IEC 60601-1-6:2010 Usability
  - IEC 60601-2-37:2005 Medical electrical equipment Particular requirements for the safety of ultrasonic medical diagnostic and monitoring equipment
  - IEC 61157:2007 Declaration of acoustic output parameters
  - ISO 10993-1:2009 Biological evaluation of medical devices
  - IEC 62366:2007 Medical devices Application of usability engineering to medical devices
  - Directive 2002/96/EC on Waste Electrical and Electronic Equipment
  - Directive 2006/42/EC on Machinery
# Measurement and Analysis

## Generic Measurement in 2D mode
- Depth
- Distance
- Perimeter
- Length and width method
- Ellipse method
- Polygon method
- Spline method
- Tracing method
- Volume
- Single line method
- Dual line method
- Triple line method
- Single ellipse method
- Single ellipse and single line method
- Angle
- Stenosis
- Diameter method
- Square meter method
- A and B ratio
- Diameter ratio
- Square meter ratio

## Generic Measurement in M mode
- Depth
- Distance
- Time
- Speed
- Heart rate
- Stenosis
- A and B ratio
- Diameter ratio
- Time ratio
- Speed ratio

## Generic Measurement in PW mode
- Speed (include PV (Peak Velocity))
- Time (include AT (Accelerate Time))
- Acceleration
- PS (Peak Speed in systole period)
- ED (The speed in the end of diastole period)
- MD (Minimum speed in diastole period)
- TAMAX (maximum speed in time average)
- TAMEAN (mean speed in time average)
- TAMIN (minimum speed in time average)
- PI (Pulsatility Index)
- RI (Resistance Index)
- PS and ED ratio
- ED and PS ratio
- A and B ratio (A/B ratio)
- Speed ratio
- Time ratio
- Acceleration ratio
- FLOWVOL (Flow Volume)
- MaxPG (maximum pressure gradient)
- MeanPG (Mean pressure gradient)
- SV (Stroke Volume)
- Each volume diameter cardiac
- Time mean speed in each stroke volume
- Cardiac output
- Heart rate

## Abdominal Measurement
- General abdomen
- Difficult abdomen
- Kidney
- Renal vessel
- Abdominal trauma

## Small Part Measurement
- Thyroid
- Breast
- Testis
- Musculoskeletal
- Upper and lower extremity joint
- Nerve block

## Vessel Measurement
- Carotid artery
- Upper artery
- Upper vein
- Lower artery
- Lower vein
- Vessel puncture
- Transcranial Doppler

## Gynecology Measurement
- Uterus and Plevis
- Follicle
### Urology Measurement
- Bladder
- Prostate
- Renal
- Kidney and ureter
- Pelvic Floor dysfunction

### Pediatric Measurement
- Neonatal Head
- Neonatal Abdomen
- Pediatric Abdomen
- Pediatric Hip
- FAST

### Obstetrics Measurement
- OB Early
- OB Mid
- OB Late
- Fetal Heart

### Cardiac Measurement
- General
- LV
- MV
- Ao
- AV
- LA
- RV
- TV
- PV
- RA
- System