Ultrasound System Specifications
The premium performance of the full functional Portable ESE-6 provides a fast and easy diagnosis by:

• Ultra-premium contrast and resolution imaging benefited from the first RF platform of the world
• All ranges of features, functions and probes
• Ease of use and ergonomic design

System Overview

Architecture

• The revolutionary RF platform, 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
• World-class Up to 22MHz imaging performance
• 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
• World-class design to be thinner and lighter
• First in class to introduce capacity touch panel in portable ultrasound system to simplify workflow and customized workflow possibility
• Less 20 sec boot up time for easy mobile ability

Applications

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

- 2D grayscale imaging
- Harmonic imaging both in tissue harmonic and pulse inversion harmonic technologies
- VFusion, directional-enhanced information compounding
- Vspeckle I& II *, specialized and adaptive imaging processing to remove speckle noise artifacts and enhance tissue edge for clarity and accuracy
- VTissue, the advanced adaptive image processing to compensate for sound and speed variation in different tissue
- Auto imaging optimization
- Easy Comparative Function to compare previous exam
- Color Doppler imaging
- Power Doppler imaging
- Simultaneous 2D and M mode
- Duplex 2D/PW Doppler
- Triplex 2D/Color/PW Doppler
- High PRF pulsed wave Doppler
- Continuous wave Doppler
- Zoom
- FULL screen imaging to enlarge imaging size
- Dual real time imaging without compromising imaging size

### Standard features

- Up to 25Mhz high frequency in system platform. Up to 22MHz's probes are supported
- RF platform and RF data processing
- Up to 1000 seconds cine storage
- 250GB SSD quick boot up and storage
- Patient information database
- Image archive on hard drive
- Quick store to USB memory stick
- Quick store to hard drive
- Report package
- Quick print to B/W and color thermal video printer
- Network storage and printing
- Full measurement and analysis package
- Real time auto wave Doppler track and calculations
- Vascular calculations
- Cardiac calculations
- OB calculations and tables
- Gynecological calculations
- Urological calculations
- Renal calculations
- Volume calculations
- Wireless networking for easy data sharing, storage and printing*(optional)
- Up-to-date connectivity and data management solutions, wireless , LAN, integrated database*(optional)
- Capability to send data to mobile by mail and blue tooth*(optional)
- Total mobile medical solution for remote data transfer and diagnostic
- DICOM compatibility*(optional)
- 2USB ports
- 6 TGC slides
- Average 4 multiple adjustable frequency in every probe and mode
- Up to 512 line density

### Ergonomics

- Unique human oriented design for comfort and convenience
- 15.6-inch high resolution flat panel display with nearly infinite positioning adjustments
- Easy to carry by integrated handle
- Full integrated probe to reduce overall space
- Integrated touchable alphabetic keyboard
- Integrated capacity touch panel to easy and simplify workflow
- Cart support up to 150mm up/down operation panel*(optional)
- USB DVDRW *(optional)

### Keyboard

- Highly sensitive 8 inch capacity touch panel
- Intuitive, configurable and touchable interactive operation interface
- Ergonomic hard keys for general ultrasound operations
- 6 TGC slides, functionality at any depth
- Backlight keys

### Image display screen

- 15.6 inch high resolution IPS, LED technology, pixel resolution
- Big angel 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
- Length: 387mm
- Width: 340mm
- Depth: 47.5mm
- Weight: 3.5kg

## Electrical Power
- Voltage: 100-240V AC
- Frequency: 50/60Hz
- Power: Max.120VA

## Trasducers

### 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 zoom

### G2-5C Broadband Curved Array
- Field of view: 72 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

### 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 and 3D color modes
- Multi-imaging frequency setting in 2D, Harmonic, color Doppler and Wave Doppler modes

### D3-6CX broadband curved array volume probe
- Field of view: 68 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, 3D color
- Multi-imaging frequency setting in 2D, 3D/4D, Harmonic, color Doppler and Wave Doppler modes
<table>
<thead>
<tr>
<th>Model</th>
<th>Field of view</th>
<th>Convex radius</th>
<th>Application</th>
<th>Frequency range</th>
<th>Imaging Modes</th>
<th>Reusable biopsy guide available</th>
</tr>
</thead>
<tbody>
<tr>
<td>F2-5CE Broadband Curved Array</td>
<td>60 degree</td>
<td>60mm</td>
<td>abdomen, OB/Gyn, urology, pediatric</td>
<td>1.4 - 5.6MHz</td>
<td>Pulsed wave Doppler, color Doppler, harmonic</td>
<td>Yes</td>
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<tr>
<td>G4-9M broadband micro convex array</td>
<td>138 degree</td>
<td>12mm</td>
<td>pediatric, abdomen, cardiac</td>
<td>3 - 10MHz</td>
<td>Pulsed wave Doppler, color Doppler, power Doppler, harmonic</td>
<td>Yes</td>
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<tr>
<td>G4-9E broadband micro convex endocavity array</td>
<td>138 degree</td>
<td>12mm</td>
<td>Ob/Gyn, urology</td>
<td>3 - 10MHz</td>
<td>Pulsed wave Doppler, color Doppler, power Doppler, harmonic</td>
<td>Yes</td>
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<tr>
<td>F4-9E broadband micro convex endocavity array</td>
<td>146 degree</td>
<td>10mm</td>
<td>Ob/Gyn, urology</td>
<td>3 - 10MHz</td>
<td>Pulsed wave Doppler, color Doppler, power Doppler, harmonic</td>
<td>Yes</td>
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<tr>
<td>D4-9E broadband micro convex 4D endocavity array</td>
<td>125 degree</td>
<td>10mm</td>
<td>Ob/Gyn, urology</td>
<td>3 - 10MHz</td>
<td>Pulsed wave Doppler, color Doppler, power Doppler, harmonic, 3D/4D grayscale, 3D color</td>
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<tr>
<td>X4-12L broadband linear array</td>
<td>Fine pitch</td>
<td></td>
<td>vascular, small parts</td>
<td>4.5 - 13MHz</td>
<td>Pulsed wave Doppler, color Doppler, power Doppler, harmonic</td>
<td>Yes</td>
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<tr>
<td>F4-12L broadband linear array</td>
<td>Fine pitch</td>
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<td>vascular, small parts</td>
<td>4.5 - 13MHz</td>
<td>Pulsed wave Doppler, color Doppler, power Doppler, harmonic</td>
<td>Yes</td>
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<tr>
<td>I7-18L broadband linear array(Hock stick)</td>
<td>Fine pitch</td>
<td></td>
<td>vascular, small parts, Hock stick</td>
<td>6.5 - 18MHz</td>
<td>Pulsed wave Doppler, color Doppler, power Doppler, harmonic</td>
<td>Yes</td>
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<tr>
<td>Model</td>
<td>Characteristics</td>
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<tr>
<td>X6-16L</td>
<td>Fine pitch, high resolution</td>
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<td>Applications: vascular, small parts</td>
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<td></td>
<td>Frequency range: 6.5 -18MHz</td>
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<td></td>
<td>Pulsed wave Doppler, color Doppler, power Doppler, harmonic</td>
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<td></td>
<td>Multi-imaging frequency setting in 2D, Harmonic, color Doppler and Wave Doppler modes</td>
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<tr>
<td>X9-22L</td>
<td>Fine pitch, high resolution</td>
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<td></td>
<td>Applications: small parts</td>
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<td>I4-11T</td>
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<td></td>
<td>Frequency range: 4.2-11Mhz</td>
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<td>Multi-imaging frequency setting in 2D, Harmonic, color Doppler and Wave Doppler modes</td>
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<td>G1-4P</td>
<td>Applications: cardiac, abdomen, Ob/Gyn, Urology</td>
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<td>S1-6P</td>
<td>Single Crystal technology</td>
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<td></td>
<td>Applications: cardiac, abdomen, Ob/Gyn, Urology</td>
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<td></td>
<td>Frequency range: 1.9-7Mhz</td>
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<td></td>
<td>Pulsed wave Doppler, continuous wave Doppler, color Doppler, power Doppler, harmonic</td>
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<tr>
<td>U5-15LE</td>
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<td></td>
<td>Applications: small parts, specially for breast, vascular</td>
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<td>Frequency range: 5 -15MHz</td>
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<td>Pulsed wave Doppler, color Doppler, power Doppler, harmonic</td>
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<td>X10-23L</td>
<td>Fine pitch, high resolution</td>
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<td></td>
<td>Applications: small parts</td>
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<td></td>
<td>Frequency range: 10 -23MHz</td>
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<tr>
<td>D3-6CE</td>
<td>Field of view: 68 degree</td>
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<td></td>
<td>Convex radius: 40mm</td>
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<td></td>
<td>Application: abdomen, OB/Gyn, urology</td>
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</table>
## Advanced Imaging controls

### VFusion
- Available on all transducers and for 2D, 3D/4D
- 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
- Special imaging processing to adapt to the speed of the ultrasound variation in different tissue
- Improved conspicuity of lesions, such as stone and tendon

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

### 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

### Spatio-Temporal Image Correlation (STIC) (Optional)*
- Visualize the fetal heart or an artery
- One complete heart cycle represented
- Using 3D static acquisition

### Tissue Doppler (TD)
- Present wall motion spectrum by using Doppler principle
- Provide wall motion direction and velocity information

### 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

### 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
### Inversion mode *(Optional)*
- 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 *(Optional)*
- Ability to edit images, make possible to cut away structure obstructing the view in the ROI
- Several cutting methods available

### Advanced Imaging controls (cont.)

#### Tissue Velocity M mode (TVM) *
- Color codes the velocities in tissue
- Present wall motion spectrum based on tissue moving
- This color image is overlaid onto the 2D image
- Captures low flow but high amplitude signals associated with wall motion

#### Multi-angle M mode *
- Sample on moving tissue from multi-angle
- Present wall motion spectrum based on tissue moving

#### 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

#### Elastic Imaging(EI) *
- Use the probe to press tissue artificially
- Color codes the elasticity in tissue
- This color image is overlaid onto the 2D image

#### 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 32cm
- 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: 7 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
<table>
<thead>
<tr>
<th>Harmonic Imaging</th>
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<tbody>
<tr>
<td>• Supports both tissue harmonic and phase inversion imaging (transducer and frequency dependence)</td>
</tr>
<tr>
<td>• Second harmonic processing to reduce artifacts and improve image clarity</td>
</tr>
<tr>
<td>• Maximize detail resolution and enhance contrast</td>
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<tr>
<td>• Available on all imaging transducers</td>
</tr>
<tr>
<td>• Extends high performance imaging capabilities to all patient body types</td>
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<table>
<thead>
<tr>
<th>M mode</th>
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<tbody>
<tr>
<td>• Selectable sweeping rates</td>
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<td>• Time marks: 0.025 – 0.5 second</td>
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<tr>
<td>• 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)</td>
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<tr>
<td>• Chroma colorization with multiple color maps</td>
</tr>
<tr>
<td>• Cineloop review for retrospective analysis of M-mode data</td>
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<td>• 256 gray levels</td>
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<thead>
<tr>
<th>Color Doppler mode</th>
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<tr>
<td>• Available on all imaging transducers</td>
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<tr>
<td>• Automatically adapts transmit and receive bandwidth processing based on the color box position</td>
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<tr>
<td>• Cineloop review with full playback control</td>
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<tr>
<td>• Steering on linear array transducers</td>
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<tr>
<td>• Selectable in baseline, line density, flash reduction, persistence, maps, frequency, PRF, wall filter, packet size, color level, sensitivity, focus position, acoustic power, and smooth</td>
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<tr>
<td>• Color gain</td>
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<tr>
<td>• Region of interest</td>
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<tr>
<td>• Baseline invert</td>
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<tr>
<td>• Simultaneous mode during PW mode</td>
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<tr>
<td>• Smoothing</td>
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<td>• Wall filter</td>
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<td>• Zoom</td>
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<tr>
<th>Power Doppler mode</th>
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<tbody>
<tr>
<td>• High sensitive mode for small vessel visualization</td>
</tr>
<tr>
<td>• Available on all transducers</td>
</tr>
<tr>
<td>• Cineloop review</td>
</tr>
<tr>
<td>• Multiple color maps</td>
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<tr>
<td>• Individual controls for gain</td>
</tr>
<tr>
<td>• Selectable baseline, line density, flash reduction, persistence, maps, frequency, PRF, wall filter, packet size, color level, sensitivity, focus position, acoustic power, and smooth</td>
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<tr>
<td>• Adjustable region of interest</td>
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<thead>
<tr>
<th>Pulsed Wave (PW) Doppler</th>
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<tbody>
<tr>
<td>• Ultra high resolution spectral FFT rate</td>
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<td>• Angle correction with automatic velocity scale adjustment</td>
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<tr>
<td>• Normal, invert display around horizontal zero line</td>
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<tr>
<td>• Selectable gray filter, dynamic range, frequency, PRF, wall filter, baseline, angel correct, sample volume</td>
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<tr>
<td>• Selectable sweep speeds: 8 steps</td>
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<tr>
<td>• Maximum velocity range: 12m/s</td>
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<td>• PW acoustic output: 0-100%</td>
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<tr>
<td>• Selectable low frequency signal filtering with adjustable wall filter settings</td>
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<tr>
<td>• Selectable grayscale curve for optimal display</td>
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<tr>
<td>• Selectable chroma colorization maps</td>
</tr>
<tr>
<td>• 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)</td>
</tr>
<tr>
<td>• Auto function to optimize spectral Doppler disp.</td>
</tr>
<tr>
<td>• Digitally enhanced stereo output</td>
</tr>
<tr>
<td>• 256 gray levels</td>
</tr>
<tr>
<td>• Post-processing in frozen mode includes map, baseline, invert and chroma</td>
</tr>
<tr>
<td>• Simultaneous or duplex mode of operation</td>
</tr>
<tr>
<td>• Simultaneous 2D, color Doppler, pulsed Doppler</td>
</tr>
<tr>
<td>• High PRF capability in all modes including duplex and triplex</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Continuous Wave Doppler (CWD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Cardiac sector array transducer only</td>
</tr>
<tr>
<td>• Maximum velocity range: 19m/sec</td>
</tr>
</tbody>
</table>
### Pview*
- 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
- User can measure distance and area
- Measurement can be made on individual frames during cineloop review
- Available on linear transducers

### 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

---

## Touch Panel Interface

### 2D mode
<table>
<thead>
<tr>
<th>• New patient</th>
<th>• PView</th>
<th>• Gray Filter</th>
<th>• Dynamic Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>• BodyPattern</td>
<td>• Fullscreen</td>
<td>• Persistence</td>
<td>• Line density</td>
</tr>
<tr>
<td>• Archive</td>
<td>• L/R</td>
<td>• Display Format</td>
<td>• VSharpen</td>
</tr>
<tr>
<td>• Probe&amp;APP</td>
<td>• U/D</td>
<td>• Image reference</td>
<td>• biopsy</td>
</tr>
<tr>
<td>• Comments</td>
<td>• Center line</td>
<td>• Maps</td>
<td>• Image angle</td>
</tr>
<tr>
<td>• End exam</td>
<td>• VTissue</td>
<td>• Frequency</td>
<td>• Focus width</td>
</tr>
<tr>
<td>• Sys setting</td>
<td>• VSpeckle</td>
<td>• Focus position</td>
<td>• Smooth</td>
</tr>
<tr>
<td>• Report</td>
<td>• VFusion</td>
<td>• Focus #</td>
<td>• Acoustic power</td>
</tr>
</tbody>
</table>

### M Mode
<table>
<thead>
<tr>
<th>• New patient</th>
<th>• End exam</th>
<th>• U/D format</th>
<th>• Sweep speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>• BodyPattern</td>
<td>• Sys setting</td>
<td>• Maps</td>
<td>• Gray filter</td>
</tr>
<tr>
<td>• Archive</td>
<td>• Report</td>
<td>• Dynamic range</td>
<td>• VSharpen</td>
</tr>
<tr>
<td>• Probe&amp;APP</td>
<td>• L/R format</td>
<td>• Acoustic power</td>
<td>• ECG</td>
</tr>
</tbody>
</table>

### CF mode
<table>
<thead>
<tr>
<th>• New patient</th>
<th>• Report</th>
<th>• Line density</th>
<th>• Wall filter</th>
</tr>
</thead>
<tbody>
<tr>
<td>• BodyPattern</td>
<td>• Invert</td>
<td>• Persistence</td>
<td>• Packet size</td>
</tr>
<tr>
<td>• Archive</td>
<td>• Full Screen</td>
<td>• Display format</td>
<td>• Colorlevel</td>
</tr>
<tr>
<td>• Probe&amp;APP</td>
<td>• L/R</td>
<td>• Image reference</td>
<td>• Sensitivity</td>
</tr>
<tr>
<td>• Comments</td>
<td>• U/D</td>
<td>• Maps</td>
<td>• Focus position</td>
</tr>
<tr>
<td>• End exam</td>
<td>• Baseline</td>
<td>• Frequency</td>
<td>• Acoustic power</td>
</tr>
<tr>
<td>• Sys setting</td>
<td>• Flash Reduction</td>
<td>• PRF</td>
<td>• Smooth</td>
</tr>
</tbody>
</table>

### PW/CW mode
<table>
<thead>
<tr>
<th>• New patient</th>
<th>• Report</th>
<th>• Trace sensitive</th>
<th>• Baseline</th>
</tr>
</thead>
<tbody>
<tr>
<td>• BodyPattern</td>
<td>• Invert</td>
<td>• Auto trace</td>
<td>• Angle correct</td>
</tr>
<tr>
<td>• Archive</td>
<td>• Triplex</td>
<td>• Mode/direction</td>
<td>• Sample volume</td>
</tr>
<tr>
<td>• Probe&amp;APP</td>
<td>• Display format</td>
<td>• Maps</td>
<td>• Audio Volume</td>
</tr>
<tr>
<td>• Comments</td>
<td>• Sweep speed</td>
<td>• Frequency</td>
<td>• Spectrum optimize</td>
</tr>
<tr>
<td>• End exam</td>
<td>• Gray filter</td>
<td>• PRF</td>
<td>• Acoustic optimize</td>
</tr>
<tr>
<td>• Sys setting</td>
<td>• Dynamic range</td>
<td>• Wall filter</td>
<td>• Acoustic power</td>
</tr>
</tbody>
</table>
### 3D mode
- Comments
- Body Pattern
- Back to B
- Start 3D
- ROI shape
- Render
- Display format
- Image reference
- View
- Gray map
- VSpeckle
- Quality
- Transparency
- Volume angle
- Movement step (after data acquisition)
- HQ Light (after data acquisition)
- Rotation angle (after data acquisition)
- Rotation direction (after data acquisition)

### 4D mode
- Comments
- Body Pattern
- Back to 4D
- Start 4D
- ROI shape
- Movement step
- Rotation direction
- Render
- Display format
- Image reference
- View
- Gray map
- VSpeckle
- Quality
- Threshold
- Transparency
- Volume angle

### System Features

#### 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 triplex
- 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, 24hours 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
- 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
### Cineloop
- Acquisition, storage in memory and display of up to 1000 seconds long of 2D, color and PW/CW images for review

### Compare
- Compare live imaging with stored imaging.

### Quick save feature
- The system provides quick save function through USB stick, internal/external HDD during or after exam
- Configurable saving file format, VRD (Raw Data), DICOM, JPEG and AVI

### Physio
- One 3-lead ECG input* (Optional)
- 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
- 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 (external HDD, USB stick)
- Network linkage
- Image export to network storage servers
- DICOM export and retrieve *(Optional)
- Mobile data transfer solution by
- Blue tooth* *(Optional)
- email* *(Optional)
- Hot point connection
- DICOM workstation for remote diagnostic solution *(Optional)
- DICOM, JPEG, AVI
- VRD and DICOM images stored in disc can be recalled on the system
- JPEG and AVI images can be played on normal computers
- On-board patient exam storage
- Direct digital storage of static image or cine-loop 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 60601-1-2:2000 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
- Area
- 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
- Diameter method
- Square meter method
- A and B ratio
- Diameter ratio
- Square meter ratio

### Generic Measurement in M mode
- Depth
- Distance
- Time
- Slope
- Heart rate
- Stenosis
- A and B ratio
- Diameter ratio
- Time ratio
- Velocity 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)
- TMAX (maximum speed in time average)
- TAMAX (mean speed in time average)
- TMIN (minimum speed in time average)
- PI (Pulsatilily 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
<table>
<thead>
<tr>
<th>Small Part Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Thyroid</td>
</tr>
<tr>
<td>• Breast</td>
</tr>
<tr>
<td>• Testis</td>
</tr>
<tr>
<td>• Musculoskeletal</td>
</tr>
<tr>
<td>• Upper and lower extremity joint</td>
</tr>
<tr>
<td>• Nerve block</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vessel Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Carotid artery</td>
</tr>
<tr>
<td>• Upper artery</td>
</tr>
<tr>
<td>• Upper vein</td>
</tr>
<tr>
<td>• Lower artery</td>
</tr>
<tr>
<td>• Lower vein</td>
</tr>
<tr>
<td>• Vessel puncture</td>
</tr>
<tr>
<td>• Transcranial Doppler</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gynecology Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Uterus and Plevis</td>
</tr>
<tr>
<td>• Follicle</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Urology Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Bladder</td>
</tr>
<tr>
<td>• Prostate</td>
</tr>
<tr>
<td>• Renal</td>
</tr>
<tr>
<td>• Kidney and ureter</td>
</tr>
<tr>
<td>• Pelvic Floor dysfunction</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pediatric Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Neonatal Head</td>
</tr>
<tr>
<td>• Neonatal Abdomen</td>
</tr>
<tr>
<td>• Pediatric Abdomen</td>
</tr>
<tr>
<td>• Pediatric Hip</td>
</tr>
<tr>
<td>• FAST</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Obstetrics Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>• OB Early</td>
</tr>
<tr>
<td>• OB Mid</td>
</tr>
<tr>
<td>• OB Late</td>
</tr>
<tr>
<td>• Fetal Heart</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cardiac Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>• General</td>
</tr>
<tr>
<td>• LV</td>
</tr>
<tr>
<td>• MV</td>
</tr>
<tr>
<td>• Ao</td>
</tr>
<tr>
<td>• AV</td>
</tr>
<tr>
<td>• LA</td>
</tr>
<tr>
<td>• RV</td>
</tr>
<tr>
<td>• TV</td>
</tr>
<tr>
<td>• PV</td>
</tr>
<tr>
<td>• RA</td>
</tr>
<tr>
<td>• System</td>
</tr>
</tbody>
</table>